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EDITORIALLY SPEAKING

SNAP GENERALIZATIONS

A recent writer on supervision and teaching, while outlining his own ideals and practice, takes occasion to criticize with some contempt the "common" practice. This, in his view, is mechanical, stupid, and utterly unworthy. His own, however, has been tried in two or three places and appears to be sound and in every way a great improvement over that generally followed.

This example is by no means isolated. A favorite procedure of not a few forceful teachers and writers in the field of education is to set their own view in sharp contrast over against the "ordinary" view. "The tendency in the country," they say, is thus and so, but should be corrected by the substitution of ideals and practices that they proceed to advocate. The attitude is frankly that of the propagandist, the special pleader, and sometimes is hardly distinguishable from that of the fanatic.

Now there are not many ideals and practices in education that are "well-nigh universal." It is variety, not uniformity, that characterizes American schools. This is so marked that up to the present no one has even attempted to portray the typical school in our country. In fact there is "no such animal." In the fortunate absence of a central bureau with authority, each state has developed its own system and in some states a large degree of local autonomy still persists. There are few generalizations that it is safe to make concerning our education except that it is varied.

But the matter has an aspect still more inexcusable. Educators who speak glibly of how things are done "everywhere" are precisely the type of person that does not take the pains to find out how they are actually done anywhere. Accurate and dependable information would cramp their style. Their pleas would be less fervid, their statements more guarded, and their emotional appeal correspondingly less. The fact is, of course, that the task of finding out what the conditions are in one locality is a staggering one, to say nothing of trying to discover what they are in the country at large. Gathering the facts as to salaries, for example, is hard enough; surveying the methods of teachers and supervisors is, of course, very, very much harder. At all events, the results would show not one or two but many differing tendencies.

To a certain cast of mind such surveys appear useless. Wholly preoccupied with its own ideas, it is but little impressed with

the work of others. Hence the easy classification into all black and all white, ego and alter. It's a comfortable state, no doubt, but after all it's a fool's paradise. The era of education as a science as well as an art will never be ushered in that way.

J. F. H.

THE UNIT OF INSTRUCTION AND STUDY

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For human beings life is made up of events or units. In some instances these events become so complex, interwoven, and varied that they seem to blend into a steady stream or process, but this is probably only a seeming, or an illusion. The stream or process in a person's life appears rather, upon closer scrutiny, to be a complex series of these interconnected events or units. One's observation of everyday life makes this evident. We do not start in the morning and go in a steady, unbroken motion till evening, or better, we do not start when we are born and go with one steady stream of life till death. This steady stream or process is really a matter of innumerable interconnected units or events.

Each of these units has a beginning and an ending, or an opening and a closing. The very use of the term unit or event implies that there is a starting and a stopping, marking some amount of duration. Some events prove to be much more enduring than others, that is, they reach over a much longer period. Their stopping points are farther removed from their starting points than in the case of other units. For instance, a person might set out to raise a crop of wheat. Such a unit in that individual's life would extend over a period of months, but note immediately that when we speak of a period we have to divide it into units, in terms of months, and a month in terms of days, and so on down to fractions of a second. The same would be true in any line of our life's activities which we might choose to investigate. What investigation means is just this delving into the nature of the units that give character to the thing which we are investigating. Whatever way we start, we find that life thus divides itself up into these start-stop affairs which we are now calling events or units.

It quickly becomes evident that there is interconnection between these units in any individual's life. Suppose that a person goes to a restaurant to get his lunch. There is a starting and a stopping of that event as a whole, but that entire event is itself made up of a great number of other events which are shorter in duration but which are none the less of this same start-stop nature. For instance, one puts on his hat. This act starts and stops. He goes from where he is to the restaurant. This also is a start-stop affair. Between these first acts and the very last one of paying his bill as he leaves the restaurant, the affair is one of units. We could analyze them in almost endless detail if we so wished. The interconnection and interdependence of the units in this case is evident. The long series that we have described is held together as a larger unit which we have called "going to a restaurant to get lunch." The little events would be merely

helter-skelter if they were not thus held together as a larger unit, and the larger unit would not be realized if it were not for its connection with the smaller units. Life thus seems to be made up not only of units as such but of units in a great variety of interconnections. One might advisedly think of such a case as the one just described as a hierarchy of units, and of what we usually call the life process as a great number and variety of such hierarchies in all sorts of relationships.

When a teacher thinks about the problems that come up in dealing with a child, he thinks in terms of units. There is no other way to think except in these start-stop, open-close, begin-end affairs which we are calling events or units. When a curriculum committee sets out to draw up a curriculum, it deals with units or events; it can deal with nothing else. Such units are what are usually known as units of subject matter to be covered in a given time. Some persons have lost confidence in these units of subject matter as the way to conceive and draw up curricula. They think rather in terms of units of child activity, or units of experience. There is a wide difference of opinion today as to what kind of units should be employed in the constructing of curricula and just as wide a difference as to the manner in which they should be originated. But with all these differences, the differing persons and groups must think, if they think at all, in terms of some kind of units.

One constructive avenue of attack on the problems of education must therefore be by way of examination of this start-stop affair, or unit. Why has this not been done before? Probably just because the unit is so common and so prevalent throughout all of our living that we take it for granted, much as we take for granted the phenomenon of breathing. Sometimes, however, these common, diffuse factors which we consider so much a part of us that we do not even observe them, greatly repay careful examination. This is particularly true in the case of this matter of units. It is possible that some of our wide differences of opinion with regard to what should constitute a curriculum for education awaits a careful study of the nature of the units which people have in mind when they speak on the subject.

Can we know enough about the nature of these units to make the study of them constructive for those who are concerned with education? Probably just being aware that they do exist and that learning does take place in such a setting is of worth to educators. We are not so limited, however. There are a few things about these units of which it is possible to be reasonably certain, and these few things should be genuinely fruitful to a student of how we live and learn.

In the first place each unit is an affair of interaction. For our purposes this interaction is to be seen as between the individual and some object, or part, in his surroundings. In fact all living is interaction. What we call the body and the mind are just different forms of interaction. When analysis is made of either it is found to be made up of great numbers of units of interaction, which in turn are interrelated in larger units. Our study cannot get us away from or out of these affairs of interaction, and, as has been seen above, we cannot find anything in our experience which is not articulated in units of some kind. These units are the ways in which interaction occurs. There is a starting and a stopping, a beginning and an ending of this give and take in the almost countless interrelationships which constitute the human individual and his conduct. Living is made up of interrelated units and each unit is one of these start-stop affairs of interaction.

How does this point have meaning for education? First, it is particularly fertile in suggestion as to the nature and function of subject matter. Our common practice keeps repeating the expression "units of subject matter," "units for instruction," and "units for study." If what has just been said about units is correct, this common practice is prone to overlook the most important part of any unit, that is, the individual whom the particular bit of interaction involves. When a scholar in physics writes a textbook on his subject, the units in which his thinking takes form are his own ways of relating with these phases in his surroundings. The larger as well as the smaller units of organization are his own. To neglect this fact in regard to textbooks or to any course of study is serious. To speak of a course of study in geography, for instance, is misleading. It would always show much less conceit and much more consideration for the learner if the form of reference were somewhat as follows: "Mr. A's Course of Study in Geography," or "The Ways in which Mr. A Handles and Organizes His Geographical Relations." Mr. A has no human right to assume anything more generalized than this for any course of study he may draw up.

The same would be true of a curriculum committee. No group can attempt to substitute its own units of interrelation for those of some other one or group without doing violence to essential human values, for it is impossible to predict, especially within any narrow time limits, such as, "the third week in March," or "10:30 to 11:00 A.M. on Wednesdays and Fridays," that the interaction units of any child or group of children will correspond with those of Mr. A or of the curriculum committee as they have been reported in their courses of study. Mr. A and the committee coöperate with the school system to deprive the child of his wholeness and integrity. Integrity is never more clearly at stake than when some one would deprive one of the ownership of his acts. No one can inject his own units of experience into another. When he so endeavors he is stupid and brutal. Much less can one organize the products of another's experiences for him in advance. The only functional, genuinely owned organization of experience anyone ever has is that which he has worked out in his own right. It is not identical with any other. Compare, for instance, the functional organization of geographical relations or of principles of physics and chemistry which we as adults now have with the organization in which we were supposed to learn it. Unless one has kept up the particular study, for example, for purposes of teaching, he will find there is scarcely any likeness between the two organizations. There is wasted effort somewhere in the scheme, and wasted vigor of living, a result which is traceable unmistakably to this failure to recognize the fact that a unit is always some *one's* unit and can belong genuinely to no one else. A unit is an affair of interaction between an individual and his surroundings.

This same fact of interaction throws light on the unit of study. A person never studies a thing as such. What he studies is what he can do with that thing. In other words he is concerned in his interrelation with that object, and what is being striven for is some sort of effectiveness in that connection. When a child finds placed before him a "unit" of subject matter, he becomes interested in his ways to effectiveness with it. His attention to it may be described as his endeavor to discover what he can do with it. Usually what he can want to do with it is widely different from what the author of the course of study wanted to do with it. This vicious situa-

tion is due to the mistaken notion that it can be foreseen what an individual or group will want to do at some stated time in the future. In a large majority of cases what the pupil finds he can do with that unit is to come sufficiently into speaking acquaintance with it to get by and keep peace with the system. We take advantage of his acquired willingness to be thus at peace with authorities—to get over a certain amount of some one's subject matter as a condition of this peace. The pupil is brought up to give hostages to society in the form of his most sacred possession, that is, the integrity of his own thought and conduct, and society through its organized education has been none too considerate in its treatment of the precious trust. All that a child, or anyone, ever can study is how he can relate up with the object before him, or what kind of a unit he can achieve in connection with it. If this is kept in mind our curriculum making is bound to be more flexible, adaptable, and humane.

A second major note of importance about these units is that they are adjustive in their nature. The starting point is a disturbance of the individual in some connection and the stopping consists in the reduction of that disturbance, that is, in the resuming of an unrestricting relationship in that connection. This is seen in the unit cited above, of one going to get lunch in a restaurant. The hunger and the recurrence of a certain time in the day disturb the person. The conducting of himself to and through the meal is just this disturbance reducing itself. After the lunch is paid for, the person goes about his afternoon's affairs. That relationship is for the time settled; it does not restrict, distract, occupy him any longer. The person is adjusted in that connection. This unit is illustrative of all units. They are disturbance-reduction affairs in the individual's interactions with his surroundings. Once it comes clearly to be seen that all experience is a matter of these adjustive units, some highly profitable notions and corresponding techniques will be added to our current thinking and practice in education.

In the first place, learning, or habit formation, will come to be seen as an adjustment affair. What we learn is ways of reducing disturbances which arise, and we always learn it in connection with actual reducing of the disturbance. The act or the pattern of action which serves to restore the relationship to equilibrium or complacency[1] is the one which in that very fact tends to become habitual. Our habits thus come about to reduce disturbances in certain types of connection, and they continue to serve in that same kind of connection. In other words, when one is learning he is getting into disturbed relationships and discovering ways of reducing these disturbances. One learns just what he does by way of reducing disturbances. If he runs away when a disturbance or problem presents itself, the running away is the act which tends to become a habit. He does in a sense achieve a reduction when he runs away from the objects to which he is having difficulty to relate himself. What he learns, however, or what becomes a habit, is to run away from that kind of problem. Of course, the unfortunate result is that he is not equipped for that kind of case when it arises again. Although the escape served to allay the disturbance for the time, the future holds just that many more difficult situations for him. That is, looked at over a longer time, the disturbances are not reduced in number or in intensity by the run-away habit. The fact remains throughout, however, that one learns or forms habits of

[1] Raup, *Complacency, the Foundation of Human Behavior.* Macmillan Co., 1925.

doing just what he does by way of reducing disturbances.

This would make any educative experience, therefore, to consist of two fundamental phases, first, disturbance of the individual in his way of interacting with some object in his surroundings, and, second, something done which tends to reduce that disturbance. At once it is evident that we could deal more effectively with educative experiences if it were possible to increase understanding on the one hand as to the kind of disturbance which is needed for effective learning and, on the other hand, as to the ways which are most effective for reducing these disturbances. Can anything informing and constructive be had along this line?

That some disturbances are more effective for learning than others almost goes without saying, but it might not be so easy to recognize just what constitutes the difference. A boy who is learning in school to get the sum of ten plus five is somewhat embarrassed if he arrives at the wrong answer. But the boy who plans to go down town in the subway and to come back on a bus is mightily disturbed at either the prospect or the actuality of getting down town and finding that he has not properly computed the sum of the two fares, one five cents and the other ten cents. We may have different ways of saying what this difference is, but no one will doubt that the latter disturbance is a more effective setting for learning than is the former. To be better advised as to the nature of this difference between disturbances would be of much practical value in education. The points which follow are steps in the direction of such understanding.

A study of the illustration reveals that the intensity of the disturbance has something to do with its effectiveness for learning. The boy in school could not have been quite as profoundly moved by his error in addition in school as he would have been by the failure to have with him enough money to get home. It can be put in this way: the degree to which the disturbance involves the whole being, in both overt and implicit consequences, that is, in both physical and mental difficulties, determines the degree of its effectiveness for strong habit formation. We may suppose that the boy had an appointment with some friends for five o'clock, which the late return from town would keep him from meeting. This appointment might involve a game in which the boy was intensely interested. Again, the boy's parents might have been expecting him at a given time and he knew that they would be much worried and put out by his failure to return, and he would have to admit to them that he had made a mistake in addition. Moreover, the boy was faced with the necessity of walking approximately four miles. This for him would be a real physical challenge. One need not exert effort to paint a picture of the varied, significant connectednesses of this failure of the boy to rightly compute the sum of ten plus five. Only an appeal to everyday experience of human beings is needed to establish the point that the learning in this case would be comprehensively and profoundly inwrought in the boy's nature. The intensity, variety, and extent of the connections of the disturbed relationship determine its effectiveness for learning.

It must be noted, of course, that this intensity could easily become too great for effective learning. If the disturbance should become so acute that the child would fail to achieve an effective reduction of it, then the learning would be inadequate. There are all degrees of this over-disturbance up to the point of what we refer to popularly as a brain explosion in moments of fright. Disturbances must be watched lest they be beyond the possible ability of

the child to achieve an effective reduction.

Another question about this intensity of the disturbance may be raised. Does not the economy of time and energy require that as much learning as possible take place in situations where the disturbance is less intense? In other words, why should the boy be so profoundly moved in order to learn well a sum of two figures? There is much reason in this argument, but it easily misleads thought. It is not only the sure acquiring of the ability to add the figures that education is after. The more important factor is the vital meaningfulness of the thing which is learned. If this factor is taken into consideration it is not strict economy to proceed on the basis that the disturbance should be just as little as possible, consistent with the fixing of the thing to be learned. In fact, there is good reason to believe that just the opposite emphasis would be called for, that is, that the disturbance should be as vital and as comprehensive in the life of the individual as is consistent with the developing of the ability to reduce the disturbance. At least this latter emphasis would preserve us from the error of isolating bits of subject matter from the more meaningful life of the individual and thus robbing him for the time being of the wholeness of his living.

The intensity or the vitality of a disturbance is conditioned also upon its social bearings. To be disturbed in a relationship with an individual or with a group is more vital, more profound, in practically all cases than to be disturbed in relation to some other object in one's surroundings. If one offends a dog he might be quite sensitive and feel remorseful, but as a rule he is not so profoundly disturbed as he would be in a case of offending a person. When the boy down town found that he had not money enough to get back, his disturbance was much more searching because friends or his parents were expecting him and because he had to meet them and admit that he had been in error. In other words, the social connections are apt to produce the most intense and telling disturbances and are, therefore, our chief concern in the study of the child's learning. If one puts this fact alongside our curricula in which the major emphasis is put upon the adjusting of the child to some organized knowledge or relations in his physical surroundings, he will become aware that we are wont to neglect this vitally important factor of the social disturbance. It is the one which requires the most careful and persistent attention in any child's education. Shakespeare recognized the greater intensity of the social disturbance in the individual:

> He who steals my purse steals trash,
> But he who filches me of my good name
> Takes that which enriches him not at all
> And leaves me poor indeed.

Turning now from the intensity of the disturbance which we have seen to be a determining factor in its fitness for learning, we shall consider another factor which is closely related to intensity. This factor may be introduced as a sense of ownership in the disturbance. If the boy wants to go down town and needs to do the figuring of the sum of ten plus five in order to achieve that end, the case is more fitted to good learning than it would be if he were being sent down town by his parents against his own wish. In fact, he would be very apt to become resentful of his parents for sending him down town, when he discovered that he had made a mistake. In other words, the mistake, or the disturbance, would lead him to develop bad habits in relation to other folks. This is in large measure due to the fact that he would not own the activity in his own

right, to begin with. The activity divided him. He was not keeping peace with his own preferred self in planning to get down town. He was keeping peace with his parents under threat. When the disturbance comes within the course of another disturbance which is genuinely the individual's own and accords with his preferences, it fulfills this condition of ownership, and once this point is made it is not necessary to insist that such a disturbance is apt to be better suited to desirable learning than one which is not owned, but which rather divides the child into two selves which more or less conflict with each other.

This matter of the sense of ownership within the disturbance is seen in the question which is frequently asked in these days as to whether it is possible or desirable to assign problems to a child. Literally one cannot transfer his own sense of ownership of a problem over to a child even in a present situation, much less can he predict what the child's sense of ownership is going to be at some future time. To set out problems and subject matter in advance for particular times is to assume that one can predict that the child will have a genuine feeling of ownership in connection with the thing set out when that particular time comes. Of course another alternative would be to assume that it makes no difference whether the child takes the problem as genuinely his own when the time comes. But this would mean that the disturbance is not a whole or complete one. There results in him either a conflict or a weakening of that very valuable tendency to maintain integrity and wholesomeness in his conduct. Whatever one's particular point of view may be with regard to the assigning of problems, he should be willing to submit it to this test of the type of disturbance which such effort at assignment creates. Study in this line is bound to throw light on the desirability or undesirability of such procedure.

Probably we are back to the same point that we considered in connection with intensity of disturbance, that is, that what constitutes the disturbance an owned one is the number and variety of connections of a basic biological and social nature that are involved. These many and varied connections in some sort of organization constitute the essential self of the individual. To disturb him in these relationships is to disturb him genuinely and the disturbance is his own. One good evidence that a disturbance merits the stamp of ownership in this sense is that it came about originally as a part of something that the individual was already doing. This throws light on our constant debate in educational circles with regard to the degree to which the child should initiate the activities which are capitalized for educative purposes. Initiation and genuine ownership are integrally related and thus probably are indispensable to each other.

The other part of a good learning experience, as was said above, consists in the reduction of the disturbance. Is there anything constructive that we can know with regard to this? Here we would soon be on very familar grounds. All of our techniques of thinking are in reality steps in the course of the reduction of disturbances which arise. The "complete act of thought" is Professor Dewey's way of describing what happens when, as we ordinarily say, thinking effectively and adequately reduces a disturbance. This is suggestive of the much that is already known with regard to the ways of reducing disturbances. The important thing for present purposes is to recognize that all of our thinking consists of ways of reducing disturbance. Sometimes our thinking gets us into disturbances, but it can probably be demonstrated that it does so in the

course of the reduction of other disturbances. Assuming then that we do know a great deal with regard to ways of reducing disturbances, it may be sufficient here to stress the point that all of these ways, especially those which appear in analyses of the thinking process, are, after all, descriptions of the steps which occur in the reduction of disturbance. This will allow us to pass on to another phase in the study of disturbance-reduction.

How can we know when a disturbance is reduced? Here we have to rely a great deal upon common sense, and promote wherever possible the demonstrations which will guide, correct, and fortify these common-sense observations in connection with everyday experience. Burnham cites a case of a small girl who, with her father on the street one day, saw a horse fall down. The horse was so tangled in the harness and shafts that he could not get up. Men disengaged the animal, pushed the vehicle back, and helped him to get up. For hours afterward this very small girl kept saying to her father, "Horse fall down." Each time the father would reply, "Yes, and the men helped the horse up again and it is all right." This kept up for some time, but finally the father's corrective explanation seemed to soothe down the intensity of the child's disturbance. The father helped the child to use her mind in such fashion as to effectively reduce a disturbance which had been caused by a happening in everyday life. There might have remained in the child some ill effect of this disturbance even after the father's assistance, but for revealing any such subtle ill effects further techniques will have to be developed. To common observation, however, the disturbance was definitely reduced. This case will serve to indicate how our judgments in common sense, in connection with the things of every day, can go a long way in deciding whether or not a disturbance that has been aroused has been reduced. For a finer and subtler measure we shall have to wait and work, but there is ample possibility within the less exact realm for us to go to great lengths in making an actual study and practice of the reducing of disturbances as they arise.

It has been all but thoroughly demonstrated that the failure of disturbances to find reduction, especially in vital social connections, is apt to leave a lurking possibility of disturbance in that kind of relationship on into later years in the life of the individual. Oftentimes, then, our study of a particular individual's problems demands that we in some way discover what disturbances do hang over in his life from the past and work out ways of securing a reduction of those disturbances. It need not be insisted at length that here we are at the heart of one of the most vital problems in the study of human conduct. When disturbances have not in the past been adequately reduced, we may know it by the manner in which they remain over to distract the individual from devoting himself wholly to the merits of some present problem. The psychoanalysts have made much of this point and have advanced it far enough upon the attention of modern thought to create the demand that further very painstaking and thorough study of it be made.

In summary, the recognition of the fact that our experience is a matter of units has opened the way for a few suggestions that should be of value in education. First, all units are units in some one's experience. If the curriculum is to be made up of units it must therefore always take into consideration the individual whose unit of experience is being considered. Second, all units are affairs of adjustment, marked particularly by a disturbance and a reduction of that disturbance. This directs the study

of learning into the consideration of the kind of disturbance and of the manner of reducing disturbances which prove most effective. There are some things which are already known in this line, such as the fact that a disturbance may be judged as to its fitness for learning, first, by the degree of its intensity, second, by the extent of its interconnections with other vital relationships, and third, by the amount of a sense of ownership which is inherent in it. Moreover, we may within wide range of common sense know whether disturbances that arise in any present situation are being effectively reduced. This knowledge is opening up to us a large field of possibility in enabling us to have some control over the degree to which any present disturbance shall be allowed to hang over and undermine, distract, vitiate the future usefulness and wholesomeness of an individual. In the making of our daily decisions about the curriculum and educational method we shall have another guarantee of being humanly considerate if we take such matters as these into consideration.

SHOULD ORAL READING INSTRUCTION BE DISCARDED?

Amy J. De May
Training Class Instructor, Norwich, New York

During the past few years there has been a great deal of dissatisfaction with the results obtained from reading as it has been taught in the public schools. Teachers in the grades realize fully that pupils cannot get the ideas presented in the subject matter which they read in geography and history. Generally they have felt that this was due to the fact that the books were written from the adult viewpoint and contained an adult vocabulary which was much too mature for grade pupils. These teachers have thought that when their pupils grew older they would have no such trouble. But teachers in high school and even in college find that students are handicapped because they cannot comprehend what is put down in the books they must read. They seem to have contracted the habit of merely saying the words either orally or mentally without having them convey any ideas to their minds. Thus they get neither information from the articles read nor appreciation of the great masterpieces of literature. Stories are read for the bare story, and none of the greater beauties of thought or expression are conveyed to their minds, the wonderful truths of poetry and of fiction being passed over unnoticed because unrecognized.

Nor is this true in institutions of learning only. Frequently those who leave school and go out into life do not rightly interpret the many symbols of thought that confront them every day. Probably they are ignorant of the fact that, as a result of this inability, they are losing both usefulness and enjoyment, and advancement in business as well, for success in any enterprise today depends as never before on correct interpretation of printed symbols. Therefore, when a person can read understandingly and rapidly, he is able to enrich not only his own life but the lives of others as well, and he becomes more efficient in whatever vocation he may enter.

In the past few years, since the leading educators have been considering the reading problem, attention has been focused upon the idea of thought-getting, especially after the pupil has passed the beginning stages and after he is supposed to be no

longer concerned mainly with the mechanics. A great effort is now being made to train the child to read for thought. This means that he shall do more than read in the old-fashioned way. Up to not so very long ago—and I fear some teachers are still doing that way—a class in reading was carried on in the following manner. First one pupil and then another was called upon to read a paragraph or two, the instructor's only part being to say "next" when one had read long enough. The teacher who made an occasional comment on the meaning of what was read was rare indeed; and the pupils were never expected or even allowed to make any remarks or to draw any conclusions from what was read. The process was rightly named "hearing the reading lesson." Is it any wonder that when these pupils attacked a lesson in geography they "read" it over in the same way and got the same amount out of what they read—nothing?

I remember now with some amusement, though it was tragic to me then, my first experience in the reading class. I had learned my letters at home when I was three years old, and had spelled out and pronounced many words from an old speller. I had read the words on the kitchen stove, and certain rhymes on advertisement cards that were much used at that time, and had printed long letters to my grandmother, before I started school at six years old, proudly carrying my new primer. On the first page of this reader was the picture of a fox running. Beside the picture were four lines as follows:

The fox can run.
The fox can run.
The fox can run.
The fox can run.

The teacher called me to her side the first morning, and with a pencil pointed to each word while I read "The fox can run," four times, with great emphasis on the word "the." For a whole week I walked a mile and a half to school and then back, and sat on a hard bench all day with nothing to do, in order to stand by the teacher's side once a day and look at the end of a pencil and *say* four times, "The fox can run." In the meantime I had read the primer half way through by myself.

At the beginning of the second week, timid as I was, I determined I was not going to read "The fox can run" again; but I comforted myself with the reflection that, as I had read it correctly for a week, she would surely consider that I knew the lesson and would ask me to read the next page. Imagine my disappointment, therefore, when the point of the pencil went down on the word "the" beside that fox running; and the teacher was amazed to see the tears running down my face, and to hear my trembling voice say, "I have read that so many times!" She had the good sense to allow me to read on for several pages, and never again asked me to read a lesson a second time.

My experience looks like an extreme case, but it was not. I saw many teachers come and go in that ungraded rural school, and I watched many beginners learning their letters as they passed to the teacher's side once each day. The primers in those days had the letters in vertical columns, the first column being the printed capital, the second the printed small letter, the third the script capital, and the fourth the script small letter. Every day for four years, with four different teachers, and not the one I had either, one poor little girl looked at the point of the teacher's pencil and said, "a-a-a-a, b-b-b-b, c-c-c-c, and so on down the four columns. I have often wondered if she ever learned to read, for when I left to enter high school she was still at it. "What else could they do?" these

teachers would have asked had their methods been questioned.

Many new methods of teaching reading have been tried since that day, and it is certain that the first stages are now much more satisfactorily taught, and the symbols are brought before the pupil in such a way as to become real tools for the recognition of new words. Phonics, phonograms, sight words, and sentences, each occupies an important place in putting the child in possession of the significance of the symbols which he must handle with dexterity before he can adequately do the process—the reading—for which these exist, before he can possibly get the thoughts and ideas from the printed page which the author intended the reader to get.

Ability to pronounce words when they are seen in printed or written form is a necessary part of learning to read, but it is far from being the only part. If the pupil can properly vocalize the word but does not know what it means, if his reading is mere word pronunciation and the words have no content for him, of what use is his reading anyway? Thought-getting, interpretation, comprehension — whatever term you use in referring to getting the sense of what is read—is the great thing in the teaching of reading. How to help students to acquire the ability to get the thought automatically from the symbols has been the concern of thoughtful teachers for some time. Experiments of many kinds have been tried by those who wished to improve the quality of their teaching of reading, after the first primary stages have been passed. Educators are now agreed that "just reading" will not accomplish the result.

The methods of teaching oral reading that had prevailed for so long were first justly attacked. The notion then crept in that, as people read practically everything silently except when in the schoolroom, all reading that is taught should be silent. They then went too far in that direction, for "just to read" silently will not make it possible for pupils to get the thought any more than "just to read" orally will do it. The only way to teach children how to read silently is to provide a reason for the reading, the same kind of reason that they will encounter in real life—looking up information on some question they do not know how to answer.

When considering the great need of this silent reading instruction, we should not lay aside oral reading as useless just because the adult does not spend the greater part of his life doing it. In the first place, oral reading, if properly taught, will show the pupil how to speak effectively when discoursing on any subject. In the second place, one of the most effectual methods of producing thoughtful silent reading is oral reading when taught as it should be taught.

As informational matter is most desirable for silent reading drills, so literature is best for oral reading study. The results of either without the other is much less than when both are given together. Silent reading, as we intimated above, should be for the purpose of answering definite questions that are considered in connection with the material that is being read. Oral reading should be literature, and for children this should be full of action. Then it must be studied with the idea of finding out what the author meant when he wrote it. The pupils must be helped by appropriate questions from the teacher to visualize the scenes, to hear the sounds, to imagine he smells the odors, and to experience the tastes. He must live through, with the characters of the story, their feelings of discomfort, of dread, of joy, and of sorrow. This can easily be done if the teacher herself sees, hears, and feels, and is thus able to ask the proper questions to draw the pupils' attention to what she wants them

to consider. The answers they make will suggest other appropriate questions, and soon the selection has taken on a new interpretation. The pupils have lived the scenes through in imagination, and thus obtained vicarious experience. This is what I call the discussion method of teaching oral reading. It is a plan for studying a selection by the class and teacher together, instead of "just reading." For this reason the books should be in the hands of the pupils only during the reading period, and no one allowed to read ahead, as this spoils the chance to draw conclusions and to "guess" at what is coming.

Suppose we take the poem "Winter," by Shakespeare, which is a very interesting one to sixth or seventh grade pupils if taught by this method, but which will prove to be of little or no interest if read by themselves either orally or silently. The poem and the class discussion are here given.

WINTER

When icicles hang by the wall,
And Dick the shepherd blows his nail,
And Tom bears logs into the hall,
And milk comes frozen home in pail;
When blood is nipp'd, and ways be foul,
Then nightly sings the staring owl,
"Tu-whit! tu-who!"—
A merry note,
While greasy Joan doth keel the pot.

When all aloud the wind doth blow,
And coughing drowns the parson's saw,
And birds sit brooding in the snow,
And Marion's nose looks red and raw;
When roasted crabs hiss in the bowl—
Then nightly sings the staring owl,
"Tu-whit! tu-who!"—
A merry note,
While greasy Joan doth keel the pot.

DISCUSSION

T. This poem is found at the end of one of Shakespeare's plays, *Love's Labour's Lost.* It was given as part of an entertainment in which certain players represented Spring by another poem given just before this one. In that poem the cuckoo is used as the bird to stand for Spring. In this poem the owl is used to stand for Winter. I will read the poem to you, and I want you to notice how the idea of winter is brought before our senses. In your study of the human body you have long before this learned what the senses are. To bring them fully before you I want some one to name them.

P. The five senses are sight, hearing, smelling, tasting, and feeling.

T. Judging from your own experience, which senses are most likely to be affected by winter?

P. Seeing and feeling. We see the snow and we feel the ice.

T. (Aim.) Let us see how the poet has taken advantage of these two facts, and whether he has been able to appeal to any other of the five senses we have named. (The teacher reads the entire poem.)

T. What senses are affected by the icicles in the first line?

Mary. Sight. When we see icicles we know it must be cold outside.

John. Icicles show it is cold when we look at them, but if we were near enough to touch them we should feel they are cold. Everybody has touched them sometime, and when seeing them or reading about them, he realizes that they feel cold as well as look cold. That would be an appeal to the sense of feeling.

T. Let us call it the sense of touch instead of feeling.

John. When I was a small child, I liked to bite into an icicle, and chew the pieces of ice. I then felt the cold with my mouth as well as with my hands, and I also tasted the icicle.

T. I am glad you thought of those two possibilities. Let us see if there is any difference between the idea that Mary gave us and the one that John gave.

Ella. Mary's answer showed an appeal to the sense of sight only, but John's included touch and taste as well.

James. The sense of sight is the first thing appealed to when one reads the line. We see at once the row of icicles on the wall, some long, some short, some thick, some slender, as

we have all seen them hang many times. John's answer needed something else to make him say he knew how they felt and tasted. He had to remember what he once did in order to realize there was an appeal to the senses of touch and taste as well as sight.

T. Yes. For the second answer one has to use his memory and his reason because the poem does not say anything about touching or tasting them. Yet touching ice and icicles is a part of the experience of us all. Probably only children do the tasting. We were all children once and may all have tasted them, and for those who have the idea of tasting, it is rightly brought out in this connection.

Drawing conclusions from a poem, or in fact from any piece of literature, other than what is told in plain language, is what we call interpretation, or reading into the piece. Interpretation is what makes the poem a part of our experience. Mary, who only saw the icicles, did not make this poem so much a part of her experience as John, who remembered that he had touched and tasted them. Yet Mary also has no doubt touched and tasted icicles, but she did not use her experience in making this poem mean more to her.

T. What senses are appealed to in the second line?

Edna. Sight and feeling. The words bring the picture of a boy blowing his fingers because they are so cold they hurt. We have all done that, and we know just how his fingers ache, for we all remember the feeling.

T. To what sense does the third line appeal?

Ernest. It appeals to the sense of sight; but it is rather the idea of warmth than of cold.

Mary. It seems to me the picture shows the necessity of providing fire to keep off the cold. While the words themselves appeal to the sight, the effects of the words appeal to the feelings by the use of our reasoning.

T. You are right. You have to use your imagination also, and in that way the imagined feeling of warmth from the fire as contrasted with the cold of winter is produced.

In the fourth line what sense is appealed to?

Kate. That appeals to the sight. Of course, it might appeal to the taste if one ate some of the frozen milk.

T. There are two ideas in the fifth line. Please take the first.

John. When we are out in the cold, we speak of our blood being chilled. Really the blood does not get any colder, but the flesh is what gets cold, and the blood going through cannot warm the flesh fast enough.

T. That is what we call a figurative way of speaking. You have all heard the expression in winter that the blood is nipped, meaning partly frozen; though we know if that really were so we should already be dead. It is only another way of saying that people in winter get very cold. To what sense does the expression appeal?

John. To the sense of feeling.

T. What idea is suggested in the second expression?

Jane. "Ways be foul" probably means the roads are full of snow, making it hard to travel. That appeals to the sense of sight at first. It seems to me that it appeals to something else that is not a sense. There is the inconvenience of traveling through bad roads. It is a feeling, but not the kind we talked of when we spoke of touching anything.

T. You are right. I was hoping some one would think of that. The word *feeling* is used in more than one way. The sense of touch is the only one that belongs with the so-called senses. We feel pain without being touched at all, and we feel pleasure, joy, sorrow, etc.—feelings which are a condition of mind; that is altogether different. All three are spoken of as feelings, and all three have already been used in this poem to make us realize winter. Tell me where.

Edna. The feeling of the icicle is the only appeal directly to the touch. The feeling of Dick's aching fingers is a feeling of pain that was not produced by touch. The feeling of inconvenience from the foul ways is the third.

T. In what way do the next three lines give us an idea of winter?

Jack. We hear the owl, and we may imagine we see the owl. The owl was used by the poet to represent winter. He enjoys himself and sings merrily in spite of the cold, for his warm feathers make him comfortable. These lines are cheery and comfortable.

T. What other comfortable impression did we get from the poem as far as we have read it?

James. The logs that Tom bears into the hall to make a warm fire. These are the only two pleasant ideas; the other ideas show us winter by its discomforts.

T. What idea do you get from the last line?

John. That appeals to the sight, but not with the idea of coldness. Joan cooled the pot by stirring the hot contents so that it may be eaten soon and make comfortable those who have just come in out of the cold.

T. In what way does the first line of the second stanza appeal to our senses?

Jennie. The blowing of the wind appeals to our sense of feeling and hearing. We can hear its roar and whistle. We feel it touch our faces. It appeals to another feeling, too—we get the feeling of pain, for our hands and bodies become chilled as an effect of the cold wind. We cannot see the wind, but it nevertheless appeals to our sense of sight by what it does. We can imagine we see the trees swaying and the snow blowing along and being piled into drifts. We may also have the other feeling—the feeling of misery because we are suffering from cold.

T. In what way does the second line show winter?

Ella. We have an impression of sound first, when we hear so much coughing that the parson's sermon cannot be heard. Then we think that the coughing is the result of the cold weather in which people have taken colds. Then we think of the irritation to the nerves of the throat which the person feels. This is a feeling of touch as well as pain. The people who cough probably feel uncomfortable in two ways besides. They are feeling sick because of the cold, and they also feel miserable because they have to make so much noise in church.

T. To what does the third line appeal?

Edna. It appeals to the sense of sight. We can see the birds sitting in the snow with their feathers puffed out, making them look like little balls. We can imagine how cold they must be. In them we again see the effect of winter. Our feeling of sympathy for them may be touched.

T. What do you get from the fourth line?

Jack. That appeals to the sense of sight first. We see how red Marion's nose is, and how raw because it is chapped. Then we think how cold she must be, and how the chapped places must hurt.

T. What is appealed to in the fifth line?

Emma. First, the sense of sight. Then the sense of taste also, as we think of the delicious taste of the roasted apples.

T. The last lines of the poem being like those at the end of the first stanza, we need say no more about them, except perhaps by putting them with the fifth line. What impression would that give?

Ella. We get a feeling of pleasure and comfort as contrasted with the discomfort represented in the first part of the stanza.

T. Look over the entire poem now, and tell in what way the poet has made us realize winter.

James. He has made us realize winter by making us feel the cold, see the snow, hear the wind, and taste the apples and the contents of the pot. We have not mentioned smelling. The roasted crab-apples probably smelled delicious, and perhaps the contents of the pot did also.

John. I think the clearest way in which he makes us realize winter is not by the appeal to the senses, but by the pain and the discomfort, the inconvenience and the suffering that come as a result of the winter. And with that he shows the means of being comfortable in winter by the provision for fire, by the warm food, and maybe the social side when the apples are roasted.

T. You are right, John. Now, could you give me one word or a phrase by which we could sum up the way in which the poet has represented winter?

John. I think winter is represented by the effect it has on everything.

T. That is just the point I wanted. You may each look back through the poem, and see if that is not just what the poet has done in every picture he has given us.

I have found that when children are tested by some standardized form of silent reading test, even when no silent reading

instruction is given, that the gain in the power to interpret what is read is very great. In order to find out how much gain was made by this method, I gave a form of the Thorndike-McCall Reading Scale to a class near the beginning of the school year. Near the end of the year I gave a second form. In the meantime I gave the class no instruction and no drills in silent reading, but had oral discussion in connection with all material read, in geography, history, health, and all other books, as well as the reading texts. After the second test, I computed the average T score for each test for the class, divided these by the number of months, and then subtracted the first average from the second to find the gain. This gain I converted into a G score. The result showed that my class had made three times the normal advancement in reading interpretation as measured by the Thorndike-McCall Reading Scale and as compared with the normal gain computed by McCall. I then tried the method on a second class for the same length of time with the same result. Finally I combined this method with a good silent reading method, and the results were five times the normal gain.

I shall say no more here about the teaching of silent reading. It has its place, and its value is inestimable. I wish to argue now for more oral reading, that is, more oral reading *study* in our schools.

DETERMINATE AND INDETERMINATE INFORMATION IN WRITTEN EXAMINATIONS

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Subject matter may be thought of as distributed along a scale of *relative determinativeness*. At one end of this scale occur the items of subject matter which are *determinate*. At the other end occur the scattering items of subject matter which are very controversial, unsettled, or indeterminate. Between these two extremes is a large group of items of subject matter which vary more or less with respect to the two extreme points of the scale.

By *determinate* subject matter is meant an item of information which approximately all people would accept as a fact unaccompanied by observable variations which would change the status of the fact in terms of time.

Examples: (a) Snow is white; (b) $2+2=4$; (c) The earth is flat. These are considered to be *determinate* subject matter items.

By *indeterminate* subject matter is meant an item of information which approximately all people would consider a controversial fact accompanied by change in the status of the fact in terms of time.

Examples: (a) A high school staff should consist of more men than women; (b) A football player is a good student; (c) In a city school system, the business manager should be directly responsible to the superintendent of schools.

The two terms *determinate* and *indeterminate* are relative and in no sense pre-

vent the *evolution* or *change of position* of any item of information on the scale of *relative determinativeness*. In fact, it seems reasonable to expect that any subject matter item of information will tend to vary in *determinativeness* directly with the amount of germane evidence or knowledge accumulated with respect to the item. Examples of *change of position* of items on the scale of *relative determinativeness* are:

1. The discovery of radio was accompanied by discussion of its possible widespread use. The *indeterminate* position of radio at the time of discovery has been almost completely replaced by a *determinate* acceptance of its widespread use and possibilities.

2. The fourteenth century controversy of whether or not the earth was flat has become an axiomatic statement unaccompanied by controversy. The *indeterminate* position of the question "Is the earth flat?" has shifted to the *determinate* position of the statement "The earth is not flat," on the scale of *relative determinativeness* of subject matter.

The question arises, "What relation has the *evolution* of subject matter items of information upon the scale of *determinativeness* to the type of question to be used in an examination?" This seems to permit a statement of a tentative hypothesis in the form of an analogy.

Determinate items of information are to Specified Answer Question Types as *indeterminate* items of information are to Various Answer Question Types.

Such an analogy logically and properly, in a hypothetical sense at least, places the many varieties of Specified Answer Types, *i.e.*, true-false, multiple choice, problem answer, drawn answer, and completion forms of question, as belonging primarily to determinate subject matter. It also places the varieties of Various Answer, *i.e.*, old type written essay, new type written essay forms and the like, as belonging primarily to indeterminate subject matter, *i.e.*, subject matter whose *change in position* on the scale of *relative determinativeness* is as yet more or less rapid and in a direction from a very *indeterminate* to a very *determinate* position on that scale.

Therefore, any valid examination in any subject matter should include the best known Specified and Various Answer Types of Question in order adequately to care for both *determinate* and *indeterminate* items of information in that subject matter course.

Some of these forms are ordinary true-false, problem true-false, multiple choice (*i.e.*, selection, arrangement, and analogy), completion statement, completion essay, the outline new type written essay[1] and the indeterminate statement.

That this hypothesis is not unreasonable is shown by the fact that Wood has accumulated evidence which supports the use of several forms of New Type along with a New Type Written Essay. The written essay form affords the student an opportunity to select a question from among several topics presented for written essay purposes. The hypothesis supports the idea that different types of question forms should be used to test and distribute different degrees of bond conditioning in order more adequately to differentiate between individuals of different amounts of achievement in the subject matter course.

[1] This new type of question is a combination of a recommendation by Ben D. Wood with that of the author.

PUPIL RATING AND REPORT CARDS

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Educational principles and practices during the last two decades have undergone many changes. Current educational thought and activity have developed a new conception of education based on individual differences, a broader and more elastic curriculum, and new principles of educational psychology and method.

In order to determine how the rating of pupils and report cards are keeping pace with new conditions, the writer made a study of the report cards used in more than sixty cities of the United States. An attempt was made to summarize the underlying principles in the rating of pupils, and the current practices followed in the use of report cards. Since the cards studied represent all sections of the country, the following summary and outline probably present a good cross section of the nation's practices in this phase of education.

I. Why Rate Children, or Send Reports Home, at All?
   1. It is advisable to report attendance, academic standing, and conduct traits to parents.
   2. Report cards are almost universally used. Parents expect them, and look forward to seeing them.
   3. Children like to know their standing.
   4. Parents are anxious to know how their children are doing.
   5. When children are transferred to another school, the report card enables the new school to place the child properly.
   6. Report cards are the basis for making promotions, and are used to justify *non*-promotions.

II. What Are the Desirable Purposes of Ratings and Report Cards?
   1. Ratings provide a means of communication between school and parents.
   2. Ratings should not be negative and merely informative, but positive and constructive.
   3. Ratings should aim to encourage improvement.
   4. Ratings should suggest to parents how they may coöperate with the school, to help their children.
   5. Ratings should give credit for improvement even if a passing mark has not yet been attained.
   6. Report cards should, wherever possible, indicate remedies to overcome deficiencies or weaknesses.
   7. Report cards should help to make parents appreciate and understand the broader and more modern aims of the school (many parents still hold to the sufficiency of the "Three R" idea of education).
   8. Report cards should aim to give a more complete inventory of the child's attainments than mere scholastic achievements.

III. How Often Shall We Rate?
   1. In a study of 41 report cards used in almost every section of the country, the following practices were found:
      a. Seventeen rated children *monthly*. Examples: Buffalo, Philadelphia, Oakland, Milwaukee, Gary.
      b. Thirteen rated children
         (1) Three times a term.
         (2) Six times a year.
         (3) Every six weeks.
         Examples: Cleveland, Rochester, St. Paul, Burlington.

c. Nine rated children
(1) Two times a term.
(2) Four times a year (quarterly).
Examples: New Orleans, Kansas City, Portland, Long Beach.

d. Two rated children
(1) Four times a term.
(2) Every 5 weeks.
Examples: Miami, Seattle.

2. In a survey made by Ohio State University:
a. 52% rated monthly.
b. 25% rated 6 times a year.
c. 14% rated quarterly.

Hence, frequent ratings may be concluded to be the most common practice.

IV. Shall We Rate by a General Mark, or by Giving Ratings in Different Subjects, Phases, and Aspects of School Work?

1. Out of 43 cards in use, in various cities:
a. Six give a general mark (most of these make provision for listing subjects unsatisfactory or deficient in, or subjects in which excellent work is being done).
b. Thirty-seven rate in specific subjects.

Rating in specific subjects is almost universal. Those cities that use general ratings are rapidly discarding that method. The latest city to adopt the specific rating plan is New York.

2. Rating in specific subjects is undoubtedly more desirable.
a. Children are not branded as failures because of poor work in two or three subjects.
b. Children are given credit for success in *some* subjects even though they may be doing poorly in others.
c. Ratings in specified subjects enable parents to know where additional help is needed, and improvement, to that extent, is much more probable.
d. Promotion by subject, or extra work in weak subjects (a special class for pupils poor in arithmetic, for example) is possible.
e. It is easier to note improvement. The general rating means either success or failure.

V. Shall We Rate by Literal Marks, Per Cent Marks, Numbers, Arithmetical Signs, Symbols, Descriptive Terms, or Other Means?

1. Out of 60 cards studied:
a. Fourteen use letters (with % equivalents noted): A = 100% to 90%, etc.
b. Thirteen use letters (with descriptive terms): A = Excellent, etc.
c. Four use percentage ratings (descriptive terms often noted): 100% to 90% = Superior. Below 75% = Failure, etc.
d. Three use descriptive terms: Good, Passing, Fair, Excellent, Average, etc.
e. Five use numbers (1, 2, 3) or arithmetical signs (+, −) or symbols (x, *).
f. Two rate on basis of 10 (10 is excellent, 8 is good, etc.).
g. Six give results of tests as well as class ratings.
h. Three rate on Normal Probability Curve basis.
(1) Rochester rates children:
Very Superior
Above Average
Average
Below Average
Failure
(2) Logansport rates children:
Above Average
Average
Below Average
(3) Republic rates children:
In Upper Quarter
In Middle 50%
In Lower Quarter

VI. Size, Form, and Color of Cards.

1. Kinds in use.
a. Cards and sheets, varying in size from about 3″ x 5″ to about 8″ x 10″.
b. Four-page booklets on cardboard or stiff paper, in varying sizes.

c. Four- or six-page folders.
d. Books of 8 to 12 pages.
e. White is the prevailing color, then yellow. Blue, pink, and other colors are also used. Some cities have different colored cards for different grades (Oakland, for example).

The four-page booklet on stiff paper, I believe, will come into more common use. The *card* now generally used has insufficient space for the various items needed.

A smaller, rather than a large, bulky card or booklet appears preferable, because smaller cards are more easily handled than larger ones. The very large cards look too formidable and imposing.

VII. Shall We Rate in Phases of School Work Other Than Intellectual Achievement?

1. Current practices (47 cards studied) are:

a. Nineteen cities rate in one or two general items, such as deportment, conduct, effort.
Examples: Buffalo, Milwaukee, New York City, New Orleans, Philadelphia.

b. Seventeen cities rate in a series of desirable qualities termed: "Habits and Attitudes of Good Citizenship"; "Character Development"; "Citizenship"; "Social Relationships"; "Work Habits"; "Moral Habits"; etc.
These habits or qualities are given in various subdivisions, phases, or details.
Examples: Kansas City, Seattle, Miami, Oakland, Horace Mann School, Lynn.

c. Five rate in desirable qualities, but instead of rating in subdivisions as above, *one* rating is given to the habit or quality which is described rather fully by a series of phrases or sentences.
Examples: Portland, Minneapolis, Long Beach.

d. Six cities have separate report cards for citizenship, attitudes, etc. There is an increasing tendency to rate in habits, attitudes, and qualities of good citizenship, character, and social relationships. The movement is to be commended and encouraged. It is useful because

(1) The aims of our schools have been extended to include social participation as an important objective of education, and hence we should indicate a pupil's progress along these lines.
(2) These ratings in social qualities offer an opportunity for slow children to compete with and to excel bright children in some valuable respects.
(3) The attainment of these habits, attitudes, and qualities is perhaps of more value than proficiency in scholastic work.

Whether it is preferable to rate in qualities merely stated, as "Initiative," or to describe the qualities in considerable detail is an open question. At the start it would probably be advisable to describe the quality rather carefully so that parents, teachers, and children may know more clearly what is implied by the term, and what the school is aiming for. The following qualities, habits, or attitudes are most frequently used on report cards:

Courtesy
Service
Initiative
Reliability
Coöperation
Self-control
Self-reliance
Consideration
Industry
Obedience
Dependability
Perseverance

Other qualities less frequently used are:

Promptness
Health and posture
Thrift
Care of property

Honesty
Truthfulness
Clear thinking
Cleanliness
Neatness
Orderliness
Sense of responsibility

VIII. Shall Children Rate Themselves?

1. Advantages:
   a. It would give children a feeling that there is a desire to be just and fair. (It would eliminate the "grudge against me" idea.)
   b. Children might better appreciate their own weaknesses.
   c. It might be an incentive to improvement.
2. Disadvantages:
   a. Children are probably too immature to judge properly.
   b. Children (and parents) like to know what others (teachers) think of their work.
   c. Ratings are effective aids to many teachers in keeping children "keyed up" to their work.

It is probably inadvisable to permit children to rate themselves in all respects, but children might be given an opportunity to rate themselves in certain respects, such as, "Have I done my best?" "Have I tried to improve my penmanship?" etc. (Example, Logan City.)

IX. Shall We Rate on the Normal Probability Curve Basis?

This is done in Rochester, Logansport, and Republic, Mich.

1. Advantages:
   a. The method is scientific.
   b. It gives a better distribution of the class.
   c. Class *itself* gives the standard, *i. e., Average of Class.*
2. Disadvantages:
   a. Poor teaching is covered up.
   b. Class may *not* be a normal distribution group, and hence the method would not work out as planned. A pupil below average in one class might have been superior in another class.
3. Suggestions:
   a. If this method is used, the standards should be *grade,* not class standards.
   b. The use of standardized tests would appear advisable under this scheme.

X. Shall Our Standards Vary With the Ability of Our Children?

1. Advantages:
   a. It is unreasonable to try to make *all* children attain the same standard.
   b. It will reduce the number of failures.
   c. It will make bright children work harder (by raising the standards).
2. Disadvantages:
   a. A slow child, in the same family, might bring home a better report card than a bright child, whose work is far superior.
   b. In life all children are measured by one standard, hence why not in school?
   c. Slow children (and their parents) will get a wrong impression of their ability.

XI. Shall Report Cards Contain Suggestions for Improving Work, Comments by Teachers, Parents, etc.?

1. Out of 41 cards examined:
   a. Twenty-four give printed suggestions for improvement (in more or less specific details).
   b. Four (Logan City, North Adams, Flatbush School, Long Beach) permit comments by *teachers.*
   c. Four (Long Beach, Logan City, Logansport, Horace Mann) invite comments by *parents.*

All these practices appear to have possibilities for helping the children, and are therefore to be classed as desirable.

XII. Typical Attempts to Improve Report Cards.

1. North Adams, Mass. (4-page booklet.) Rates in:
   a. Citizenship—11 qualities listed.
   b. Health—6 qualities enumerated.
   c. Scholarship—Attitude and work.

By a check the teacher indicates the pupil's attitude toward work and the pupil's standing.

d. Studies—The teacher lists those in which the pupil is doing *especially good work,* those *passing,* and those *needing attention.*

2. Long Beach, Cal. (4-page folder.)
   a. Rates in habits and attitudes desirable for good citizenship:
      (1) Manners.
      (2) Obedience.
      (3) Dependableness.
      (4) Workmanship.
      (5) Thrift and respect for property.
      (6) Attitudes.
      Each item is explained by several words or phrases describing desirable aspects of these habits or attitudes in positive terms.
   b. Rates in school subjects, listed by groups:
      (1) English group (6 divisions).
      (2) Health habits group (3 divisions), etc.
   c. Gives suggestions to parents.
3. Lynn, Mass. (Card.)
   a. Rates in school subjects (divided into six allied groups).
   b. Rates in Social Relationships and Qualities (three groups).
      (1) Under "Work Habits" are:
         (a) Initiative and leadership.
         (b) Neatness.
         (c) Care.
         (d) Order.
         (e) Attention and concentration.
      (2) Under "Moral Habits":
         (a) Honesty.
         (b) Courtesy and consideration.
         (c) Interest and effort.
         (d) General conduct and self-control.
      (3) Under "Health":
         (a) Nutrition (weight compared to height).
         (b) Hygienic condition.
         (c) Cleanliness.
4. New Brunswick, Burlington, Miami, Patchogue (have similar cards, 4-page booklets). They rate in:
   a. Individual subjects.
   b. Attitude toward school work.
   c. Attitude toward recitations.
   d. Conduct.

There are six characterizations to choose from in each division under a, b, c, d. The teacher checks one trait in each division.

5. Logan City, Utah. (4-page booklet.) A progressive report card.
   a. Rates 8 desirable attitudes (check or cross indicates satisfactory or improvement needed).
   b. Rates 9 subjects in scholarship report.
   c. Provides space for remarks by teacher and parents.
   d. Provides for a report by parents on three items.
   e. Provides for self-rating by pupils on several items on habits and attitudes.
6. Oakland. (4-page folders.) Three types of cards, in different colors and using different items, for 1-2, 3-6, 7-8 years.
   a. Rates school subjects, monthly.
   b. Rates 8 qualities of citizenship and character development.
   c. Lists 6 matters needing attention (checks indicate that improvement is desirable).
7. Horace Mann School, New York City. (8-page booklet.) Most detailed card used.
   a. Rates school subjects.
   b. Rates habits and attitudes desirable for good citizenship in great detail (31 divisions).
8. Rochester.
   a. In upper grades (3-6 years) rates:
      (1) Citizenship —3 sub-divisions
      (2) Scholarship—5 " "
      (3) Arts —5 " "
      (4) Health —4 " "
   b. In lower grades (1-2 years) rates:

(1) Citizenship —3 items
(2) Scholarship—5 "
(3) Health —3 "

9. Seattle. (4-page folder.)
   a. Rates General Progress (scholarship, citizenship, effort).
   b. Rates Qualities Desirable for Good Citizenship and School Success (not more than four of 11 items marked each quarter).
   c. Rates studies.
   d. Gives health record.
   e. Reports on extra-school activities.
10. Portland, Oregon. (4-page booklet.)
   a. Rates 5 qualities for Citizenship and Success (described in detail).
   b. Rates in school subjects.
   c. Gives suggestions to parents.
11. Kansas City.
   a. Rates school subjects by letters, indicating Excellent (E); Superior (S); Average (M); Poor (P); Failure (F).
   b. Rates 11 habits and attitudes in various details: Health, Thrift, Coöperation, etc.
      Only *some* are noted:
      D—Well developed.
      U—Needs development.
      I—Shows improvement.

XIII. What Should a Good Suggested Card Contain?

1. General suggestions for report cards, by Chapman and Ashbaugh of Ohio State University:
   a. Report cards should aim to be positive and constructive, rather than negative and informative.
   b. Report cards should serve to bring parents into closer harmony with purposes of the school. The message of the report card should develop in the parents a more sympathetic attitude toward the school.
   c. Report cards should aid in expanding parent's views of the general scheme and aims of education. Education is more than the "3-R" notion of many people. In addition to broadening curriculum in the intellectual phase of education, we are laying more stress on the moral, social, and physical aspects of education.
   d. Report cards should aim to show not only the strong and weak spots in the mastery of subject matter, but should suggest, if possible, the reason for the failure.
   e. Report cards should be positive and constructive in reporting phases of civic, health, and character education.
   f. The traits rated should correspond to stage of development of the child.
2. A card I would suggest should contain:
   a. Ratings in Scholarship—subjects listed (preferably in groups).
   b. Ratings in Citizenship—5 or 6 desirable qualities listed, such as:
      (1) Self-control and obedience.
      (2) Courtesy and consideration for others.
      (3) Coöperation and service.
      (4) Initiative and self-reliance.
      (5) Effort and industry.
      (These qualities would vary in the different grades.)
   c. Ratings in Health:
      (1) Cleanliness.
      (2) Neatness.
      (3) Hygiene.
      (4) Posture.
      (5) Play and sportsmanship.
   d. Suggestions for improvement.
   e. Place for teacher's comments.
   f. Place for parent's comments.
   g. Provision for self-rating by pupil (in upper grades) in some items, where self-rating is feasible.
   h. Provision for noting improvement and giving encouragement even if the pupil has not earned a satisfactory rating.

DOWN WITH DICTATION

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Democracy is coming fast to schoolrooms, yet the rank and file of teachers are dictators still. Because they are, the learning task of many a child is rendered very difficult. Strange as it may seem, the kindest, most considerate teacher, even she who manages her schoolroom by moral suasion, may be one of these offenders.

Perhaps the large majority of teachers still give numerous dictation exercises to the children. They read one or several sentences at a time, and demand that the children write exactly what was read to them. This type of exercise is very frequently employed in English teaching. It has been assumed that by its means children learn to write good sentences, to punctuate, and to spell. As a matter of fact, any dictation exercise, in and of itself, does little or no teaching; it is almost wholly an examination exercise. Usually it becomes an exercise to stimulate children to make mistakes in those things which it is supposed to teach, and to perpetuate these errors. Worse still, it becomes to a number of pupils a strong annoyer, inducing fears, uncertainties, and all sorts of emotional complexes. It forces the child to put emphasis upon remembering what was said, and therefore distracts him from the thing he is supposed to do.

Teachers who have become conscious of these facts are abandoning such dictation exercises. Instead, they are substituting mimeographed or blackboard samples of the types of sentences and punctuation which they wish the child to learn, and they are calling his attention to good models from selections of the best literature, and giving him an opportunity to enjoy imitating them. There are now available a number of self-teaching exercises which are designed to free the pupil from the curse of class dictation, which set him to observing and imitating samples in such a manner as to exercise him in the maximum of good learning habits and specific skills without any of the annoyances incident to his experiences when he attempts to write as the teacher dictates.

The subject in which the greatest injury to children comes from dictation is, no doubt, arithmetic. The average child is so engrossed by the difficulty of keeping in mind all the details of the problem which the teacher dictates to him, that his efforts at solving the problem are greatly interfered with. When the teacher dictates arithmetic problems to her pupils, most of the task she is setting before them has little or nothing to do with the main task which she wishes to exercise them in. Most of their efforts are absorbed in trying to keep in mind all the details. In spite of their attempts, some of these details slip away from them, or get mixed up, or distorted in their minds. In this event, it is impossible for some of the pupils to arrive at a correct solution. But their failure may be no test whatever of their ability to solve the problem.

A very curious thing has happened with respect to teaching arithmetic, on account of these difficulties which the child has of keeping in mind problems which the teacher dictates. The majority who have written arithmetics have been influenced greatly for like reasons. For example,

they, like the average teacher, have taken it for granted that the shorter a reading problem is, the better for the learner. It is easy to see how this practice and conclusion have been arrived at. The average teacher not only dictates problems from her head, but she also dictates them from the textbook. She finds, of course, that the average child is more likely to get the shorter problems right than those that are longer. As a result, the problem which she dictates is so short and to the point that it has nearly all the milk of human interest squeezed out of it. So, also, the written problems of nearly every arithmetic make very little emotional appeal and scarcely ever call into play the child's imagination. Nearly all of them are so stupidly uninteresting to the learner that their doing almost always is on the plane of drudgery. Can anyone imagine the child reading the arithmetic problems of the average textbook for enjoyment? Nevertheless, arithmetic textbooks are now appearing which are so interesting that one may hear it said of them that they vie at Christmas time with electric trains and toys.

There are available scientific data which demonstrate pretty conclusively that the reading problem in arithmetic ought to be much longer than it is, in order to create images and arouse feelings in the child so that he is more likely to arrive at a correct solution of it. Anyone who will take the trouble to read the chapter entitled "Imagination in Arithmetic" in my little pamphlet, *Prevention and Correction of Errors in Arithmetic*,[1] will find such scientific data. In that study it was found, for example, that the type of problem written very concisely after the fashion of the usual problem in arithmetic, and the type dictated by the average teacher, prove to be much harder than a similar longer problem involving exactly the same fundamental operations but embellished by appeals to the imagination. Examine the two problems below.

1. A girl caught 35 of her string of 135 beads when the string broke, and could only find half of the rest. How many beads did she save?
2. Bertha's daddy bought her a new string of 100 beads. While she was playing tag, the string broke. Poor Bertha! the beads scattered in every direction. She caught 48 of them before they fell, but she found only half of the rest. When she put the beads on another string she had only —— beads.

When these problems were mixed among ten other problems, 384 worked the second one correctly, while only 263 of the same elementary school children did as well with the first one; 513 children from grades five to eight were tested. There can be no doubt that, if these problems had been dictated, fewer would have been correct on the second than on the first. But in the study, the problems were on a printed page before the children.

These facts seem wholly contrary to the experience of the average teacher. She, indeed, will insist that the shorter the problem, the easier it is. How can the seeming contradiction be explained? It is easy. The average teacher has been dictating her problems to the child; the writer presented the problems in this study in printed form. The child had the problem right before him. He did not have to worry about keeping all the details in his mind. He could go back to them as often as he chose. The longer problems were more interesting, of course; they appealed to his imagination; they made him feel the situation of the problem; he was carried back into his experiences. He did not have to ask himself whether he should add, subtract, divide, or multiply; he just did the

[1] Published by the Plymouth Press, Chicago.

right thing because the pictured problem became almost as if it were real.

Anyone who will observe a child of three, or four, or five will readily discover that this little child, in his play, is not confused concerning which process must be employed as he plays and thinks about number relations of his toys. Can you imagine a baby subtracting when he should add, or adding when he should subtract? Long before the child gets any formal training in arithmetic, he exercises himself in all of the four fundamental operations. He adds without knowing that he is adding, he subtracts without being conscious of what he is doing; he just feels the situation and meets it as he interprets it. Now, a good problem in arithmetic helps the child create in his imagination the situation which the problem deals with. The learner, as he feels and sees the concrete situation which the reading problem relates and describes, does the right thing without necessarily being aware of why he should do so.

But, to repeat, an interesting problem of this sort must be very concrete, must arouse imagination, must therefore include a number of details. It necessarily must be anything but brief.

What common sense conclusion, then, shall we arrive at? Only one, of course. We are going to quit dictating reading problems in arithmetic to children. Instead, we are going to put before them in written, mimeographed, or printed form such problems as will make the child go through his imagination back into his experience and create the facts involved in that problem as if they were before him, face to face. Then, as the scientific data clearly indicates, he will wonderfully increase his ability to solve problems. Arithmetic, then, will become a subject of rare interest to the learner. The textbook in arithmetic in the future will be so attractive to the child that he will enjoy it, just as he enjoys his best story-books. This textbook will be replete with problems which suggest a flood of interesting pictures to the child's mind, and with numerous graphic illustrations that will make the story problems all the more entrancing.

A TRY-OUT OF THE UNIT PLAN IN TEACHING BIOLOGY

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Effective teaching is always conditioned by effective planning. Effective learning is conditioned by a clear knowledge of what is to be undertaken and carried through to reasonable completion. It is just this clear conception and definition of work to be done that makes the so-called "unit" plan of teaching attractive. The unit method is not a new thing; it is an outgrowth of several good methods of instruction. When the writer's experiment with this method was begun, the idea in mind was to give the student something definite to do and at the same time to provide enough work so that there would be no excuse for anyone being idle at any time during a class period of sixty-five minutes. Other methods did not seem to give the proper incentive for working. The brilliant student was a particular problem. Reports were sometimes assigned to the student, but usually nothing was done with the reports except to grade them or, rather, check on "quantity" for a mark. This led to copying from books merely to get a report to hand in to the teacher. Rarely did any student feel that the report was part of his education. It was something to get a grade on—a poor kind of busy work.

The unit system was planned to combat this situation and to provide a full class hour of work for every member of the group. It was not the aim to set up a situation of pure individual instruction, but: (1) to direct each student according to his needs in accomplishing a definite piece of work; (2) to supply enough work on the topic under consideration at the time to keep all of the students busy and interested the full class hour; (3) to plan the work in such a manner that the brilliant student could work as much as he cared to on work related to the topic but not required as a minimum; (4) to keep the group together or at least on the same topic.

The work was planned for one semester and was broken up into sixteen topics or units of work. In some cases the units were enlarged by supplementary exercises. No attempt was made to keep the laboratory work and class work separate. It was all done as laboratory work in one room.

A regular textbook was used, but this was supplemented at all times by references to other texts, books, and magazines in the room library. The students were allowed to move about in the room to get books or discuss with one another problems of the topic.

ORGANIZATION

The unit is handed to the students in mimeographed sheets. Each unit is assigned a certain length of time for completion and must be handed in on time. This unit is usually broken up into several topics or "jobs of work." It may include:

1. Class discussion of definite problems.
2. Laboratory exercises of purely experimental nature.
3. Class reports of general interest.
4. Demonstration exercises by the teacher or some member of the group.

5. Field trips, planned as to where to go, what to look for, and what to do with material collected.
6. Information exercises for drill.
7. Motion pictures or slides to illustrate some particular part of the unit.

Each sub-topic is presented as a problem to be solved and is evaluated by a definite number of points, which is credited to the student on completion of the job.

At the beginning of each unit is a paragraph which tells of the work accomplished to date and a statement of the new problem to be attacked, and other instructions that may be necessary to start the work. The teacher explains to the student any points that might cause trouble and waste of time.

The student then begins work on the unit, which may take a week or ten days to complete. After finishing a part, or topic, the class is called together to clear up any difficulties that may remain and to be given directions for attacking the next topic.

When an entire unit has been completed and written in the notebook, the work of each student is checked to see: (1) if he has completed all of the work required; (2) if it is correct and not merely copy work from the book; (3) if it has been done in a workmanlike manner. If it does not check up, the work is returned marked "Incomplete" and the student will not get credit for it until it is complete.

The next step is the test which must follow the completion of any unit. This test is usually varied in form. It may be true-false, completion, association, logical selection, or unlabelled drawings. If the student passes the test satisfactorily, he is marked according to the number of points earned. (This will be discussed more fully under the marking system.) If he fails to pass the test, he must study and take the test again. I have not found that this breaks up the group, because stragglers are checked up and helped with the work so that they are usually ready to go on before the majority of the class has proceeded very far.

EXTRA WORK

Each student must accomplish a minimum amount of work in each exercise. If the student wishes to branch out in the topic, it is possible to do so by means of work designated as extra work. Each job of extra work is assigned a definite number of points and is credited to the student when satisfactorily completed. This extra work may be in the form of:

1. A special study of some phase of the work not covered in the minimum assignment that is of interest to the student.
2. Special investigations or experiments that are of interest to the student.
3. Individual excursions or field work.
4. Preparation of some work to be presented to the class, such as an illustrated talk or a demonstration.
5. Readings in books or magazines on any topic of especial interest to the student.

I have found that even the slower members of the group are able to do some of the extra work assigned. This type of extra work encourages the student to be on the lookout for things of interest in his everyday life and incidentally to apply some of the knowledge gained.

MARKING SYSTEM

The marking system eliminates many of the troubles experienced by most teachers in ascertaining marks. Each student knows, by checking over the notebook, how much work he has accomplished and understands that the work accomplished is the basis for his mark. There is little chance for argument.

As has been stated before, each unit is evaluated by a definite number of points

and each piece of extra work is evaluated in the same manner. The mark then depends on: (1) amount of work successfully done; (2) passing the test over each unit with a score of not less than 90%. The marks given are A, B, C, and E (failure). No conditions are accepted. The work is either complete or incomplete; that is, each student must complete the minimum amount of work or fail.

To make the marking system clear, let us assume that for a particular exercise the work has a minimum evaluation of eight points. Extra work is in the form of:

1. Reports—2 points.
2. Individual excursions or field work—3 points.
3. Special experiment—3 points.
4. Reading on some topic of interest—1 point.

To make a mark of C, assuming that the student passes the test successfully, the student must complete all of the required work of the unit, *i.e.*, eight points. This is marked on the paper and on the student's record as eight points.

To make a mark of B, the student must have the eight points required for a C, and in addition extra work totalling one-half of the total number required for a C. This could be accomplished in this case by making an excursion for three points and readings for 1 point, making a total of 12 points for the exercise.

To make an A, no limit is placed on the amount of work to be done, but to get this mark the student must show at least double the number of points required for a C.

All marks and information relative to the work of the student are kept on a special record card as given below.

It will be seen that the marking system is objective and leaves no doubt in the mind of either student or teacher what mark the student has earned.

SOME OBJECTIONS

There are, of course, a number of objections that may be made to this plan. The first objection usually made is that it gives students too many opportunities to copy from one another. This is true, in part. It would be impossible to prevent

BIOLOGY SCORE CARD

Name..... Date..... Grade..... Period.....

Average..... Ruch-Cossman Score..... Cooprider Score.....

Unit Date	On Time	Regular Work	Pts.	Extra Work	Extra Pts.	Avg. Test	Total Pts.	Mark

a dishonest student from copying, but if the student gets credit for the work he must pass the test, and that is exactly where the copy work falls down. It does not take the average student long to realize this and to get to work. Another thing that tends to eliminate copying is that each student is busy most of the time in getting his own work and soon resents the attempts of loafers to try to get something for nothing. The teacher who is constantly working among the group and directing the study can easily detect this during the class period. If it is done outside of class, the teacher knows if the student has not been using his time in class and, by a few pointed questions about the work, can usually show the loafer the error of his ways.

The second objection is that it leads to hunting answers rather than actual study. This can only be overcome by careful planning of the work and presenting problems that will require study and experimentation rather than questions that may be answered by copying a paragraph from the book.

The third objection is that there is a lack of socialization in this type of procedure. This objection will not hold because the students are permitted and encouraged to help each other wherever possible. They will work together in many cases. If a student does a good piece of work, he is encouraged to report his findings to the group. Finally, the class as a group discusses each unit before going on to the next.

The fourth objection is that it leads to "book study" rather than investigation. It is the problem of the teacher to plan the work so that there will not be too much "book work." This is provided for by field work and actual use of equipment in the laboratory in working out the exercises. Much of the work consists of what is ordinarily called "lab work," or actual experiment.

The fifth objection is that too much time is spent in writing notes. This may be an objection, but usually if the student takes the time to write down his thought on a matter he has a better chance of assimilating it and remembering what he has learned. At least he has the information at hand where he can refer to it again if he should forget it or have any occasion to use it.

The sixth and final objection to be discussed is that there is a tendency to be satisfied with the minimum amount of work. This objection is not as pronounced in this method as in other methods of teaching. The work is planned to keep the average student busy mastering the minimum essentials. In other methods it is sometimes doubtful whether or not the minimum essentials are mastered by the average student.

SOME ADVANTAGES

The following are some of the advantages of the unit plan:

1. Definite teaching aims.
2. Definite understanding on part of students regarding work to be accomplished.
3. Some attempt to care for individual differences.
4. Students receive credit for work accomplished.
5. Discipline problems reduced to a minimum.
6. Develops in the student self-reliance and a "work attitude."

STUDENT REACTIONS

At the end of the first semester, the following questionnaire was given to each student in the course. They were asked to be candid and to do as they pleased about signing their names. The results were as follows:

THE UNIT SYSTEM

Please answer the following questions:

1. Does it make you work too much outside?
   Yes—11. No—47. No answer—4.
2. Do you feel that you learn as easily?
   Yes—57. No—1. No answer—4.
3. Does it help you study?
   Yes—55. No—1. No answer—6.
4. Would you rather use the study-recite method?
   Yes—10. No—51. No answer—1.
5. Do you think it is fair to all?
   Yes—45. No—12. No answer—5.
6. Do you feel that you have learned more this semester?
   Yes—56. No—4. No answer—2.
7. Do you feel that you have really learned something after completing unit?
   Yes—54. No—2. No answer—6.
8. What do you like or dislike about it?
   Have more time to study on questions.
   Dislike writing (a few).
   Like definite aims (majority).
9. How would you improve on it?
   More reference books. More recitations. Grading.
10. Remarks (anything you want to say about it). Most favorable.

It will be seen from this that the reaction in most cases was favorable to the method.

ACHIEVEMENT

At the end of the semester all tests for the units were put together and given at one time as a final test. The students were allowed one hour to complete the test. No time was given for review and no attempt was made to review the work of the semester. The results showed that 80% of the group were able to make a score of 70% on all of the tests in the time allowed. If more time could have been given, no doubt the result would have been much higher. It indicated that most of the group had mastered a good part of the material presented during the course and were able to recall much of it without review.

This is briefly the result of an experiment with the unit system. I am not trying to defend the system, but I am trying to find out its value. It does seem, however, from the results obtained, that this plan is worthy of trial and further experiment in the teaching of high school science.

THE CLEARING HOUSE

SEVENTH GRADE HOUSE PROJECT

Seventh grade arithmetic had become a disappointing and difficult subject to teach. I knew my trouble lay in lack of interest and I was determined to find a way to solve my problem. Many times, the pupils had given me invaluable suggestions as to how they would like to study a subject, and I decided to have them help me in this.

At the beginning of the semester, the class and I made a general survey of the work to be covered. We noticed that the greater portion of the work consisted of compound denominate amounts, lumber measure, brick work, shingling, carpeting, papering, plastering, painting, and percentage. One of the pupils suggested that we build a house and from it estimate the cost of building, furnishing, and upkeep. After an enthusiastic discussion, we decided to have the house constructed in proportion to a plan for a large house; that is, using one inch for each foot. Also we decided to raise money by means of a candy sale and have the house built by an architect; thus we would be assured of exact proportions. The actual work was to be estimated from the dimensions of the large house, using the small house as a model.

In order to make it seem as though we actually owned such a house, we thought best to find a suitable location for it. For the next day's assignment each child was to make a survey of the city and pick out the lot or lots suitable for a person of moderate means. He was to consider, in making his choice, the improvements, such as good roads, water, light, sewerage, location in reference to car line and school, and the future value of the property based upon the probable growth of that portion of the city. The following day each pupil had selected a location and was eager to extol its merits. After a discussion, they were in favor of two lots, one located in the best residential part of the city, and the other, in a new but rapidly growing section. A committee was then appointed to consult the real estate men and inquire about the cost and to gain any other information possible. The report brought back next day was that, in the new portion of the city, two excellently located lots could be obtained for $1650, which was less than the cost of the one lot located in the best residential section. Besides, the real estate men told them, the new school would be within a few blocks, the car line just a block away, and all improvements had been made on the property. The pupils decided to buy these lots and another committee was sent to arrange for the purchase of the property. We then studied how lots were surveyed and estimated, and the table of land measure was introduced and applied.

The pupils were then ready to select a plan for the house. Books on architecture were brought to school and catalogs were sent for. This involved the writing of business letters and, as we would soon be wanting information on other materials for our house, I had each child bring one or two advertisement offers taken from newspapers and magazines. For a composition lesson that day they wrote business letters requesting literature and samples. Then we discussed various plans of houses and some of the pupils drew the best ones on the blackboard. A house plan suitable for our property and use was finally found. In the meantime, a prominent architect of

the city became interested in our project and offered to construct the model for us. Our local newspaper, also, helped us by giving us a little publicity and encouragement. We felt that a great deal of time and labor would be involved in the construction of the house and so carried through the plan for a candy sale.

Now we were ready to start the actual building estimates. The first thing to be considered was the excavation. As they had never paid any particular attention to this before, a committee had to be sent to find out how the contractors of our city went about it. They brought back the following facts:

One man can excavate about 1 cubic yard of earth in an hour. Work is done for 40¢ a cubic yard, except sand or clay soil, which is done for 60¢ a cubic yard. Labor is estimated at 40¢ an hour. The hauling away of the dirt is estimated at 35¢ a load.

Consulting these facts, the pupils composed and solved the following problems:

1. Find the number of cubic yards in an excavation 6 feet deep, 41 feet long, and 24½ feet wide.

2. Find the cost if the charge per cubic yard is 40¢, which includes cost of labor, and 35¢ per cubic yard for hauling the dirt away.

Before we could estimate the cost of the foundation, we had to determine the kind of material we wanted. A diversity of opinion called for a study of the various kinds used, such as concrete, stone, wood, cement and brick. Here the advertising material proved a great help and I appointed various members of the class to give oral talks on foundation materials, their use, endurance, and practicability. Several quite heated debates arose and I was pleased to note one or two laggards bringing voluntary samples obtained from our local factories. With a knowledge of how the cost could be approximated, they made and solved individual problems such as the following:

1. Find the cost of building to the height of 9 feet, the four walls of a house 41 feet long, 24½ feet wide, if the walls are 2 bricks thick, and *no allowance* (new method) is made for openings, the cost per 1000 bricks being $20.

2. Find the cost of building a foundation of stone to the height of 9 feet, if the walls measure 41 feet in length and 24½ feet in width, and a cord of stone is estimated at $5.50.

The majority of the class preferred a brick foundation, although the stone proved cheaper.

After the foundation had been, presumably, completed the estimate of the sides of the house became the next big problem. This took considerable time and study. The framework was taken first and then the finishing materials. As our house was to be a wooden structure we had only to consult lumber dealers and get from them the kinds of lumber sold and the cost per board foot. A committee was again sent out to find how contractors of our city estimate the amount of lumber and the approximate cost. They found that after getting the size of the board needed, the number of boards and the cost per board foot, it was a simple application of the principle of lumber measure—the number of pieces times the number of inches in thickness, times the number of inches in width, times the number of feet in length, times the cost divided by 12 (the number of inches in a foot), times 100 or 1000 (depending upon the cost). After they had arrived at an estimate I had them compare it with one made by a contractor and found only a slight difference.

The roof, we found, could be made of many different materials. Among these were wood shingles, tar paper, tile, metal, wood shingles dipped in creosote, asbestos, and paper. Visits to factories and lumber

dealers were made, samples were obtained, and the qualities, uses, and prices were discussed. Tile and metal they thought would be too heavy; tar paper, paper, and asbestos would not be durable enough; ordinary cedar shingles would not be as durable as wood shingles dipped in creosote and, therefore, they decided to use the latter. From the following information a problem was composed and solved:

Eight hundred shingles will cover 100 square feet of roof surface. The cost of creosote dipped shingles is $7.25 per 1000 shingles. Therefore: Find the cost of shingling, with creosote dipped shingles, a roof 28¼ feet long my 13½ feet, and 12 feet by 12 feet.

The house was then ready for the finishing processes. Plastering seemed the most logical thing to do next. Contractors informed the children that plastering is estimated by the square yard and that no allowance was now being made for openings because of the difficulty in cutting out the corners. The usual cost is 35¢ per square yard. The following rooms had to be plastered and the children again composed problems for each: living-room, dining-room, breakfast nook, bedroom, and closet. A sample of one of the problems is:

Find the cost of plastering the walls and ceiling of our living room if it is 23½ feet long, 13 feet wide and 12 feet high, and the cost is estimated at 35¢ per square yard.

The amount and cost of the moldings and baseboard were easily estimated. They saw at once that the distance around the room minus width of openings was all they needed to know to find the number of feet needed. The cost depended upon the kind of wood used and the width needed. The number and size of the windowpanes were estimated by a committee of pupils and these facts were taken to a hardware store and the cost found. Right here I should like to say that the coöperation of the business people is necessary for the success of a project of this kind.

During all this period our model house had been used just for explaining the construction of the house and for measuring estimates, but now it was to be really used. The interior and exterior were to be painted. For this we used the sample paints sent us by factories as advertising material and the stain for the roof was brought by a student whose father was a paint dealer. The boys proved to be careful and efficient painters, and such was their pride in their house that they allowed only the pupils with the steadiest hands to paint the intricate parts. The problems involved the staining of the roof, the painting of the sides of the house, and the painting of the kitchen. Some of the problems were:

1. Find the cost of painting a house 14 feet high, 41 feet long, and 24½ feet wide with two coats of paint estimated at $3.75 a gallon (a gallon covering about 500 square feet).

2. Find the cost of painting the walls and ceiling of our kitchen, the length being 13 feet, the width 9 feet, and the height 12 feet. Allow for the following openings: 3 doors, each 3½ feet by 6½ feet, 1 window 5 feet by 5½ feet, and another window 2 feet by 5 feet. (The cost per gallon is $3.75 and one gallon covers approximately 500 square feet.)

Now the little house was ready for the interior decorating. In this, the supervisors of drawing and manual training proved a great help. In our drawing classes we discussed color schemes, kind and arrangement of furniture, lighting, location of rooms in reference to warmth and coolness, and all these in relation to comfort and use. I had them bring pictures of color schemes for rooms taken from magazines, color cards, and catalogs advertising furniture, draperies, and rugs. These we criticized as to good points and bad points in color and arrangement. The next

drawing lesson was devoted to making paper cutting plans of one wall of the living room. They used the proportions of our model house and each pupil did his own measuring. From colored construction paper they cut out the furniture, fireplace, window drapes, and so on, and pasted them on large sheets of paper which served as the walls of the room. When completed the plans were displayed around the room and the pupils given a chance to decide which one was to be used. This was done with each room and care was taken that the color schemes of all the rooms harmonized.

After all the plans had been made, a list of the articles needed for each room was made. The pupils were divided into groups and each group was made responsible for finding the cost of the articles on its list. They found the average cost by going to all the stores and comparing the results obtained. Their information was brought to class and problems like the following were made:

Find the cost of the living-room furnishings if the cost of each article is as follows:

Three-piece davenport set of black walnut	$310.00
Floor lamp	45.00
Rug	135.00
Piano	950.00
Small chair	24.00
Mantle clock	25.00
Mirror	27.00
Writing desk and chair	60.00
Davenport table	45.00
Drapes	21.88
Candlesticks	1.25
Candlestick holders	5.00
Table lamp	21.00
Desk set	8.00
Table scarf	3.50
Total	$1,681.63

When the cost of the furnishing of each room had been found in this way, the total cost of building and furnishing our home was estimated.

The plans of the furniture were made in drawing class and the boys made the furniture in manual training class. The girls made the drapes, scarfs, bed linen, dining-room linen, pillows, and other things in sewing class. The rest of the work like papering, painting, making of flowers, window boxes, putting designs on rugs and furniture was done outside of school hours. There was not a day's lapse of interest during the whole semester and the average daily attendance was higher than that of any previous semester had been. The examination also proved that this kind of work had not put them back in any of their work.

Agnes Burmeister,
Humboldt School,
Wausau, Wis.

AS REPORTED

ANNUAL MEETING OF THE NATIONAL CONFERENCE ON EDUCATIONAL METHOD

The coming annual meeting of the National Conference on Educational Method will not only be as interesting as usual, but promises to mark an important epoch in the history of the organization. At the Tuesday morning session in Boston, the Conference will present its first yearbook, which is also the first yearbook dealing with supervision to be presented by any group. This project was begun under the presidency of Miss Mabel E. Simpson, who appointed Dr. L. J. Brueckner of Minneapolis as chairman of the yearbook committee. Dr. Brueckner has been able to secure a large number of the best known workers in the field to contribute chapters. All phases will be covered. There will be accounts of actual supervisory procedure as now found in the field, research completed, under way, or contemplated, together with discussions of underlying philosophy. The book will thus represent a composite of the very latest theory, practice, and research in supervision.

After a brief presentation of the book by Dr. Brueckner, two or three of the contributors will address the Conference, taking the opportunity to elaborate and illustrate their contributions to the book, which are necessarily abbreviated in publication. Arrangements for this program are not yet complete, but two speakers already secured, namely, Dr. W. H. Kilpatrick and Dr. S. A. Courtis, insure the success of the session. The third speaker will doubtless be one whose material will differ significantly from that of the two already mentioned.

This meeting will be followed by the usual annual business session, at which time officers for the coming year will be elected.

Another interesting program is being planned for the Wednesday noon luncheon. The general topic will be "Essential Viewpoints in the Guidance of Teachers." Three speakers will be asked to discuss this topic from the viewpoint of the teacher-training institutions, the secondary schools, and the elementary schools. While each speaker must necessarily be limited to fifteen minutes, each has been selected for his ability to present clearly and succinctly a number of major points in the brief time. Dr. W. C. Bagley will speak from the angle of the teacher-training institutions and Dr. Philip W. L. Cox, of New York University, from the angle of the secondary school. The representative of the elementary schools is to be selected.

The Tuesday morning session will be in Sanders Theatre, Harvard campus, W. H. Burton presiding. The luncheon session on Wednesday will be in the Copley-Plaza Hotel, presided over by Miss Mary A. S. Mugan, Vice-President of the Conference, who has contributed materially to the development of this noon meeting. Sanders Theatre is reached very easily by subway, and is less than twelve minutes from downtown. Full directions for finding it will be in the printed program.

Reservations for the luncheon should be made well in advance. Arrangements for the sale of tickets ($2.50 each) are being handled by the office of the Conference Secretary, Dr. James F. Hosic, Teachers College, Columbia University, New York.

W. H. B.

TWO NEW JOURNALS

In September was issued the first number of the new *Journal of Educational Sociology*. This is a monthly magazine of theory and practice, edited by Professor E. George Payne of New York University, assisted by three associate editors and a large body of contributing editors. Something of the field to be covered may be inferred from the titles of the articles in this first issue, which are as follows: "The Sociological Basis of Curricula for Teacher Training"; "The Subject Matter of the Curriculum and Sociology"; "Research in Educational Sociology"; "What is Educational Sociology?"; "Educational Sociology in Normal Schools"; "Behavior Adjustments and the Junior High School Curriculum"; "How to Translate Detailed Objectives into a Program of Civic Education."

The magazine is issued in the familiar format of the one-column-to-the-page professional magazine. It includes editorials and book reviews as well as articles. Correspondence with regard to it should be addressed to 13 Astor Place, New York.

The second of these new journals has the somewhat striking, if not ambiguous, name of *Independent Education*. The reference seems to be to what we have long been familiar with as education in private schools. This impression is borne out by a study of the table of contents, which shows for the most part names of those who are in charge of such schools. The principal news item, indeed, is an account of a recent meeting of country day school headmasters. The magazine, therefore, may be placed as the house organ of this group. Among the special features are full-page illustrations and a page for parents. Miss Amy Schüssler of Teachers College, New York, contributes a full list of textbooks recently acquired by Bryson Library of that institution. It is announced that Miss Schüssler's comments on various textbooks will be presented in this department every month.

The usual reviews are included, together with news, such as an account of the Locarno Conference on New Education, provided by Dr. Lucy L. W. Wilson of Philadelphia.

The format of this publication is more like that of the *Literary Digest*, being somewhat larger than that magazine, printed with two columns to the page in large, clear type. There seems obviously to be a field for both this new publication and the *Journal of Educational Sociology*. Correspondence with regard to *Independent Education* should be addressed to 45 West Forty-fifth Street, New York City.

TWO NOTABLE YEARBOOKS

One of the most vigorous organizations of school principals in the United States is to be found in Chicago. This group has just issued its Second Yearbook, which is an imposing monograph of some 150 pages. The first part is devoted to a Report of the Sub-Committee on Curriculum and deals specifically with organization of fourth grade reading. Three distinct types are recognized, namely, free reading, work-type reading, and assigned literary reading. The committee also deals with the radio as a part of the school curriculum, the administration of visual education, and adds for good measure a study of pupil failures and subject failures.

The second part gives the report of a committee dealing with supervision. This is the second report by the Chicago Principals' Club on supervision, the first having appeared some four years ago. The report is something of a miscellany, presenting a list of studies made in the various elementary schools, ideas gleaned from supervisory bulletins, home work, as well as a list of recommended books on supervision.

Not the least interesting part of the Yearbook is the last chapter, which presents a list of books and articles published by Chicago school principals during the year 1926-1927. Fourteen writers are listed with nearly twice as many titles. This will present a fine mark for other principals' organizations in the country to shoot at.

The Yearbook as a whole is a most creditable performance. It represents a cooperative activity and also shows clearly how scientific methods and scientific information are permeating the great mass of our leaders in education.

The second yearbook to be reported is that of the Department of Classroom Teachers of the National Education Association. This also is the second account of studies by this group and includes a somewhat wider range of interests. The body of the report is made up of a large number of short contributions, mainly by classroom teachers, grouped under some three different heads. The point of view of the writers may be inferred from the fact that they center their thought upon "The Child as the Center," "The Development of Habits and Attitudes," and "Some Special Problems and Their Treatment." In addition to the articles, there are also reports of the officers of the organization and of its standing committees.

This series of studies, like the preceding, reflects the progressive ideals and practices of education of our time. The classroom teacher at her best is no longer a follower of routine but an original student of the problem of courses of study and instruction and a first-hand investigator. These studies, to take a single example, of specific problems met by classroom teachers who do not have the aid of visiting teacher service represent a development far in advance of what was possible only a few years ago.

CLEANLINESS CRUSADE

Whatever prompts and encourages the interest of the child in cleanliness is a valuable aid to health. In the interest of promoting health education, the Procter and Gamble Company have prepared a series of exhibits, leaflets, posters and other similar materials, which are available for distribution to schools throughout the country.

These Cleanliness Crusade sets (with soap), which consist of a complete set of educational material, charts, manuscripts, etc., prepared under the supervision of Doctor F. G. Bonser of Teachers College, Columbia University, are furnished to teachers for the nominal sum of twenty-five cents and have been of considerable value to teachers in their instruction on the fundamental and vital questions of sanitation and hygiene.

A set of this Cleanliness Crusade material may be procured by application to the Health Cleanliness Service, 565 Fifth Avenue, New York, N. Y.

THE READER'S GUIDE

THE IMPROVEMENT OF READING

Three new volumes on the teaching of reading invite comment.[1] The work by Professor Gates is distinctive. It is wholly the report of extensive and painstaking scientific experiment carried on over a period of nearly ten years by the author himself or under his immediate direction. It has, nevertheless, the merit of being clear, readable, and practical. Any who may have lingering doubts as to whether university studies in education can furnish definite and effective guidance in solving the troublesome problems of actual classroom instruction may resolve them by examining this admirable handbook.

The chief problem the investigator set for himself was this: how to discover the specific reading difficulties of the individual pupil and proceed most surely in helping him to overcome them. Testing, diagnosis, and remedial treatment are the three steps to be taken and methods for doing this are fully set forth, together with original and carefully devised materials for taking them.

The main portion of the book falls into two parts, work in the primary grades and work in the upper grades of the elementary school. In each part typical deficiencies in reading are described and the appropriate remedial materials and treatment indicated. Basic to the whole, however, is the author's contention that reading methods should be *intrinsic* rather than merely direct and supplementary. That is, the materials of reading should be so constructed that the pupil while actually reading in normal fashion is trained to surmount difficulties that ordinarily are dealt with in special drill exercises in phonics, word recognition, and the like, apart from reading. This is a positive challenge to prevailing practices.

From the opening chapters the reader learns that the materials and procedures recommended have been developed through the study of over 13,000 children for more than 10,000 of whom permanent records were kept. A standard reading vocabulary for primary grades was worked out and in all some seven different types of tests of reading ability were developed. Although effort was directed largely toward perfecting a technique for dealing with the more difficult cases among children who are learning to read, nevertheless a very important contribution was made to our knowledge of how to teach reading to all.

The two remaining volumes in this group of three are alike in coupling supervision and teaching. *Supervision and Teaching of Reading* is intended primarily as a text for teacher-training classes and a desk book for critic teachers in normal schools. The method of compilation was first to collect a large number of statements of difficulties met with in the teaching of reading, organize these under main heads or "problems," and then present in brief form such scientific and other information as might be available to aid in solving them. The sources drawn upon are indicated in the footnotes and in the lists of references appended to the various chapters.

[1] *The Improvement of Reading.* By Arthur I. Gates. Macmillan Co., 1927.
The Supervision and Teaching of Reading. By Julia M. Harris, H. L. Donovan, and Thomas Alexander. Johnson Publishing Co., 1927.
The Teaching and Supervision of Reading. By Arthur S. Gist and William A. King. Charles Scribner's Sons, 1927.

The treatment is decidedly comprehensive. Three chapters at the beginning are devoted to "Principles of Supervision," "A Supervisory Campaign," and "The Demonstration Lesson." Between chapters on such aspects as "Word Difficulties," "Phonics," "Motivation," "Tests," and "Materials" are placed two chapters dealing with the primary and intermediate grades respectively. Considering this range and the necessary condensation, however, the discussion is remarkably concrete. Free use is made of outline summaries, tables, and graphs. The whole should lend itself very well to the uses for which it was prepared.

Messrs. Gist and King are principals of elementary schools in Seattle, where they worked out in their own schools and in the give and take of discussion with their colleagues the ideas for the conduct of reading set forth in their book. It is worthy of note that, having proceeded by a different route, they arrived at an almost entirely different series of chapter headings from those in the volume just mentioned. First analyzing the reading program and its objectives, they then discuss the parts of that program one by one. Thus they write of "Audience Reading," "Silent Reading—Recreatory," "The Teaching of Poetry," "Silent Reading—Work Type," and so on. This arrangement has obvious advantages for the principal who wishes to study the work in reading in his school systematically.

These authors, too, have gathered and presented much concrete illustrative matter, which often appears in the form of plans or lessons of classroom teachers. From these alone the reader can learn much as to the practices actually to be observed in progressive schools. The text is supplemented by means of numerous selected references in which the portions to be read are indicated by chapter or page. This is a method that might well be followed far more often than it is.

This attempt by principals to offer practical assistance to their fellows is certainly to be commended. A wealth of valuable experience and study of their problems by principals goes unrecorded. Messrs. Gist and King have set an excellent example.

MATERIALS AND EQUIPMENT FOR ELEMENTARY SCHOOLS

Modern aims of school work can be realized only by appropriate pupil activities, but these in turn call for materials and equipment without which they can hardly or at all be carried on. What materials are available, how they should be chosen, how used and cared for, have been most thoroughly presented by Miss Knox in her recent book.[2] "Thoroughly" is hardly adequate; systematically, accurately, usefully, satisfactorily, might well be added. Now that it is done, we wonder why it was not done sooner—until we realize the magnitude of the task. To collect so large an amount of detailed information from so widely scattered sources makes most contemporary book-makers in the field of education look like pikers.

The point of view is labelled "New Schools for Old." This is emphasized in a brief introduction by Professor Bonser. The field is charted under the heads: "Teaching Materials Related to Curricular Activities" and "General School Equipment and Practical Problems." For convenience the following grouping of subjects was adopted: "Scientific and Social Activities," "Constructive Activities," "English Activities," and "Artistic and Recreational Activities." On second thought this appears to be not merely for convenience but because of certain vital

[2] *School Materials and Equipment.* By Rose B. Knox. Houghton Mifflin Co., 1927.

relationships. Possibly schools will find a suggestion here as to how they might well arrange their teachers' programs and equip their rooms. This book is clearly indispensable to all school principals and supervisors and should be available to all teachers in elementary schools. There is nothing at present even approaching it in its field.

At last the neglected "middle grades" are recognized, named right out in meeting, and their peculiar problems dealt with. How small the body of available literature we have relating to them is, however, becomes evident at a glance when one examines the bibliographies in the book Mr. Freeland, Miss Adams, and Miss Hall have written.[3] Most of the references are general, not specifically related to these grades at all.

The authors are members of a state teachers' college and have had in mind primarily the need of a textbook for classes of students preparing especially to teach in the intermediate grades—the fourth, fifth, and sixth years of the ordinary elementary school. One of their objects is to show what advances are being made in the more progressive schools. Since most of the students will have only their own earlier experiences as pupils to guide them, the wisdom of this approach is apparent. A systematic attempt has been made to acquaint the student with what sort of training the pupil coming from the primary grades has probably had and with the new tasks he must face in the fourth and succeeding grades.

In the hands of students who have the opportunity to see for themselves in a good demonstration school the principles at work that are stated and illustrated, this book should prove a welcome addition to the materials now in print suitable for classroom use in normal schools. Teachers in service will also find it suggestive and might well check their methods by it.

[3] *Teaching in the Intermediate Grades.* By George E. Freeland, Roxana M. Adams, and Katherine H. Hall. Houghton Mifflin Co., 1927.

SIGNIFICANT ARTICLES

PROGRESS IN THE KINDERGARTEN

The October number of *American Childhood* is called the thirty-sixth anniversary issue. Apropos of the occasion, five of the leading kindergartners of the country contribute brief summaries to a symposium of progress in the field of kindergarten education. Miss Lucy Wheelock reviews briefly the development of the kindergarten and points out that the most pressing need of the present is better articulation between the kindergarten and the primary grades. Miss Elizabeth Harrison feels that the kindergarten has been passing through a period of confusion, but is sure to emerge into order and completeness. Miss Mary Dabney Davis thinks the kindergarten has made a great contribution to American education. She supports this contention with reference to such movements as that for play activities, flexible daily programs, conduct curricula, and other similar ideals. Miss Edna Dean Baker likewise stresses the influence of the kindergarten in bringing about better practices, particularly in the presentation of subject matter. The kindergarten has been opposed to formal instruction and mere memorizing. It has helped to make punishment unnecessary in the schools by providing a more rational procedure. Finally, Miss Josephine Chase tells the story of kindergartens in New York City. Something like 35,000 visits are made by kindergarten teachers in New York to the mothers of the children every year. The large staff of kindergarten instructors is gradually being increased and looks forward to the time when there will

be a building especially devoted to kindergarten administration in the city.

SUPERVISION IN ST. LOUIS

Many, perhaps most, of the large cities in the United States now have their own educational journals, which serve primarily as house organs for their administrative and instructional officers. Two recent numbers of *The Public School Messenger,* the organ of the Department of Education in St. Louis, are especially noteworthy. These are Number 2 of Volume XXIV and Number 1 of Volume XXV. Both are given up entirely to presentation of principles and plans of supervision, together with case studies of good teaching. The editor of these contributions, under whose direction they are prepared, is Mr. F. M. Underwood, district superintendent in charge of supervisory activities. In Part I we find the general principles that underlie good supervision on the one hand and good teaching on the other. In Part II these principlies are applied in detail to the various school studies by the supervisors of the subjects. In Part III we find stenographic reports of lessons in a great variety of subjects, together with comments by the editor. The whole is a most satisfying demonstration of professional activity in a large city.

PROFESSIONAL INTEREST IN CHICAGO

While the public press is devoting more or less space to the disgraceful trial of Superintendent McAndrew in Chicago, the great rank and file of the teachers and supervisory officers go on their way as usual. The September number of the *Chicago Schools Journal,* edited at the Chicago Normal College and published by the Board of Education, contains no less than nine excellent studies, some of them distinctly scientific in their character, by members of the city system. For example, Mr. D. J. Beeby, principal of the Oglesby School, reports a pupil-symposium on silent reading. This consists of a number of speeches by pupils in that school, telling how they improved their silent reading abilities. One of these accounts is accompanied by a graph by means of which the speaker showed that she raised her score in comprehension from 6.5 in June, 1926, to 13 in January, 1927, while the standard score was only 9. Mr. Beeby points out that written compositions in his school are usually reproductions of what has already been given orally. These speeches were presented to the school assembly and afterward written out by the speakers. In this way unusual excellence in mechanics of written expression is attained.

Other articles in this noteworthy number deal with such topics as spelling, health teaching, art, supervision, and even camp cooking for boys.

TEACHING HOW TO STUDY

A far more important discussion of the problem of teaching pupils how to study than one usually finds in educational journals is contributed by Miss Regina Zimmerman, also of the Chicago school system, to the October number of *Educational Review.* She calls her scheme a working plan. This consists, first, in the giving of a series of tests to determine just what the pupils do and what their methods are. For example, she first gives a test on the use of the text itself, then a second test on the use of the library, and finally a test on study habits. The students are supplied with printed copies of the general rules for study, which are illustrated in the article by those used for the study of a history lesson. The working out of the plan is shown concretely by means of two tables that give in terms of points the scores made by certain pupils on the successive tests.

THE HISTORY ASSIGNMENT

A related but more elaborate discussion, confined in this instance to the problem of the assignment, is to be found in *Historical Outlook* for October from the pen of J. Morton-Finney. The writer regards the recitation as a unity of four separate elements, one of which is decision as to what is next to be done. The pupil, he thinks, is entitled to a clear understanding of: (1) what he is expected to do; (2) where he is to do it; (3) when he is to do it; and (4) mutually derived suggestions as to how he may do it. There is, however, no such thing as the average pupil. A class is made up of individuals who differ widely. The teacher must, therefore, adapt his method to individuals, making sure that the slow pupils as well as the bright ones know how to work. The general principles set forth in the article are illustrated by means of an outline for the study of history, together with the reproduction of a card called "How to Solve a History Problem." The writer truly says that this making of a good assignment "is not merely another aspect of pupil worship or soft pedagogy, but it is an unerring sign of professional proficiency."

METHOD IN SUBTRACTION

One of the problems upon which the Research Bureau of Ohio State University has been working for some time is that of determining whether the take-away method or the additive method in subtraction is the better. The Director of the Bureau, Professor Buckingham, reports briefly the gathering and treatment of evidence and the conclusions reached in *Educational Research Bulletin,* Volume VI, Number 13. A dozen or more teachers participated in the investigation by teaching two groups of pupils, one by the take-away method and the other by the additive method. The results were carefully tested and interpreted, and the writer concludes that the preponderance of the evidence is in favor of the take-away method. He says further that although retention was not tested, it is well known that initial impression and mastery both tend to permanent memory.

This article is a gratifying example of how scientific studies in universities may assist practical school people in settling problems of method. It illustrates further the importance of coöperation between the specialist and the classroom teacher in solving such problems.

A POINT OF VIEW IN RELIGIOUS EDUCATION

In view of the rapidly growing interest in ways and means of providing proper opportunities for the religious education of children, many readers will find the article on "Religious Education—A Point of View," by Professor Hartshorne in *Child Study* for October, of value. The writer's thesis is summed up in the words: "Religion, then, is not a method, like science, nor a body of knowledge, nor a collection of customs, nor the performance of rites and ceremonies, nor the seeking of this or that satisfaction. Religion is a discovery of kinship with the eternal, a discovery which is also, in this very act, an achievement of selfhood in a universe of co-existent selves."

The program which Professor Hartshorne offers in the light of these principles may be very briefly summarized by saying that we must see these values in the school studies, take advantage of school situations for developing coöperation, and make contact with great characters, both present and past, to build up ideals and develop habits. The article as a whole might fairly be interpreted to be opposed to separate formal instruction in religion as contrasted with the development of religious life through everyday contacts.

THE NEW BOOKS

Psychology, The Science of Mental Activity. By Frederick H. Lund. New York: A. G. Seiler, 1927. Pp. 488. Illus. $2.50.

Creative Education. By Henry Fairfield Osborn. New York: Scribners, 1927. Pp. 360. Illus. $2.50.

Arithmetic for Teacher-Training Classes. By E. H. Taylor. New York: Henry Holt and Co., 1927. Pp. 344.

What Shall the Public Schools Do for the Feeble-Minded? By Guy P. Davis. Cambridge: Harvard University Press, 1927. Pp. 225. $3.50.

Donald in Numberland. By Jean M. Peedie. New York: Henkle Co., 1927. Pp. 64. Illus.

Manual for Small Museums. By Laurence V. Coleman. New York: Putnam, 1927. Pp. 394. Illus.

Minimum Essentials of Mathematics. Ninth Year. By Daniel W. Werremeyer and Charles H. Lake. New York: Silver, Burdett and Co., 1927. Pp. 244. $1.16.

The Pathway to Reading — Teacher's Manual for Fourth, Fifth and Sixth Readers. By Bessie B. Coleman, Willis L. Uhl, and James F. Hosic. New York: Silver, Burdett and Co., 1927. Pp. 170.

The Music Hour—First Book. By Osbourne McConathy, W. Otto Miessner, Edward B. Birge, and Mabel E. Bray. New York: Silver, Burdett and Co., 1927. Pp. 92. Illus.

Literary Aims and Art. By Harrison R. Steeves. New York: Silver, Burdett and Co., 1927. Pp. 250.

The Psychology of Play Activities. By Harvey C. Lehman and Paul A. Witty. New York: A. S. Barnes and Co., 1927. Pp. 242. $2.00.

A Handbook of Children's Literature. By Emelyn E. Gardner and Eloise Ramsey. Chicago: Scott, Foresman and Co., 1927. Pp. 354. $2.00.

The Squirrel Tree. By Margaret J. McElroy and Jessica O. Young. New York: American Book Co., 1927. Pp. 94. Illus.

World History Today. By Albert E. McKinley, Arthur C. Howland, and Matthew L. Dann. New York: American Book Co., 1927. Pp. 870. Illus.

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